NOVEMBER 28, 1931

Railway Age

FOUNDED IN 1856

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No.
BEAVER FALLS, PA.

TRANSILUX

The new moulded translucent material—pleasing color, texture and light transmission—durable—non-inflammable.

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The Safety Car Heating and Lighting Co.

NEW YORK CHICAGO ST. LOUIS BOSTON
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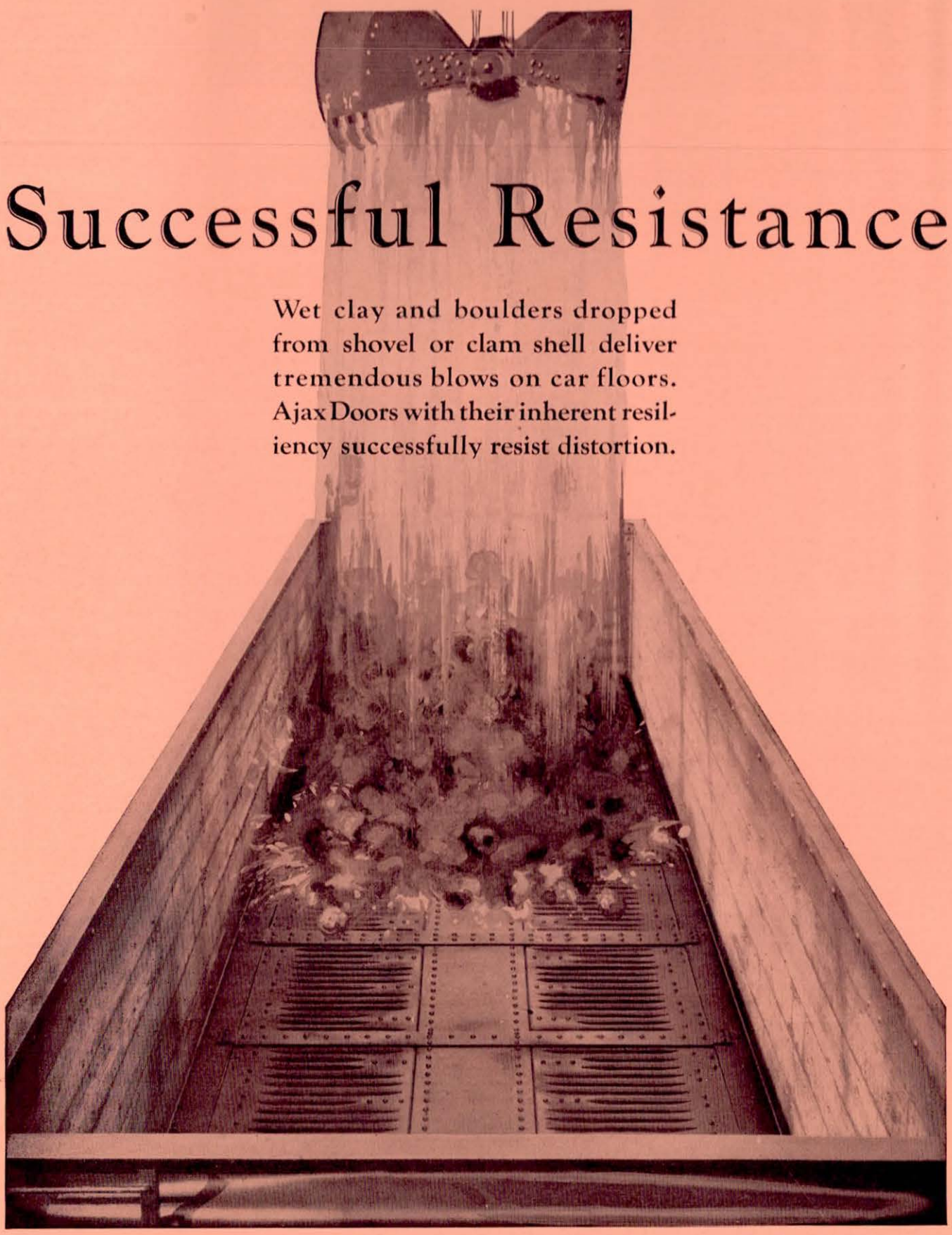
Successful Resistance

Wet clay and boulders dropped from shovel or clam shell deliver tremendous blows on car floors. Ajax Doors with their inherent resiliency successfully resist distortion.



UNION METAL PRODUCTS COMPANY

NEW YORK · CHICAGO · ST. LOUIS · WASHINGTON
RICHMOND · HOUSTON · SAN FRANCISCO · KANSAS CITY · MONTREAL

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Address communications to 30 Church St., New York City.

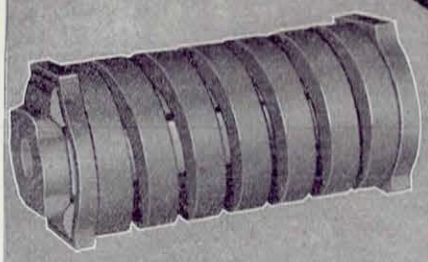
MINER

Class A-22-XB
Friction Draft Gear

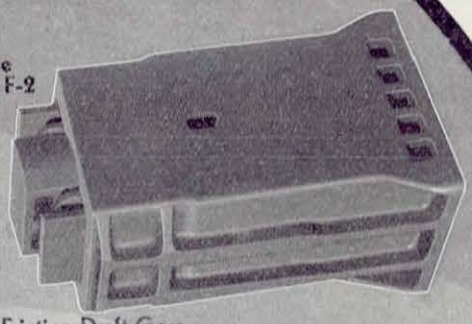
Exceeds the A. R. A. Requirements for Certified Draft Gears

W. H. MINER, INC.
CHICAGO

Cardwell and Westinghouse Draft Gears are made in sizes, capacities and designs to fit any new or old car, or locomotive.

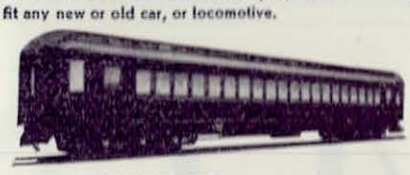


Cardwell Westinghouse Friction Draft Gear Type F-2

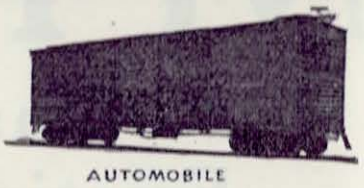


Westinghouse NY-11-D Friction Draft Gear

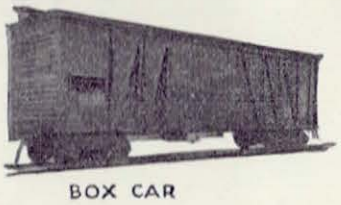
Cardwell L-25 Friction Draft Gear



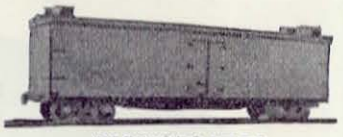
PASSENGER



AUTOMOBILE



BOX CAR

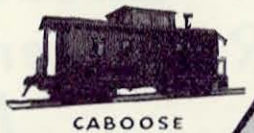


REFRIGERATOR

FLAT CAR

GONDOLA

TANK CAR



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ORE CAR

Sustained Protection Reduces car maintenance costs

Let us explain the new developments which enable Cardwell and Westinghouse Draft Gears to retain their initial high capacity throughout their long life. » »

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332 South Michigan Avenue
Chicago, Illinois

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Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name Registered U. S. Patent Office

Vol. 91 November 28, 1931 No. 22

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Modern Coal and Cinder Plants Will Save Money ..... Page 814

The twenty-first article in the Operating Economy Series, pointing out, with the aid of typical cost data, the expanded field for economy offered by recent improvements in engine-servicing facilities.

Early Action on Wages Anticipated 818

A report of meetings held during the past few days between a committee of railway presidents and railway labor leaders, at which the possibility of a wage reduction was the leading topic of discussion.

Santa Fe Locomotive 5000 Tested 829

A detailed analysis of tests made by the A., T. & S. F. on a modern 2-10-4 locomotive, which handles 15 per cent more tonnage in 9 per cent less time and with 17 per cent less unit fuel consumption.

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"Big Business" and the Railways 811
"Who Pays Rural Highway Costs?" 812

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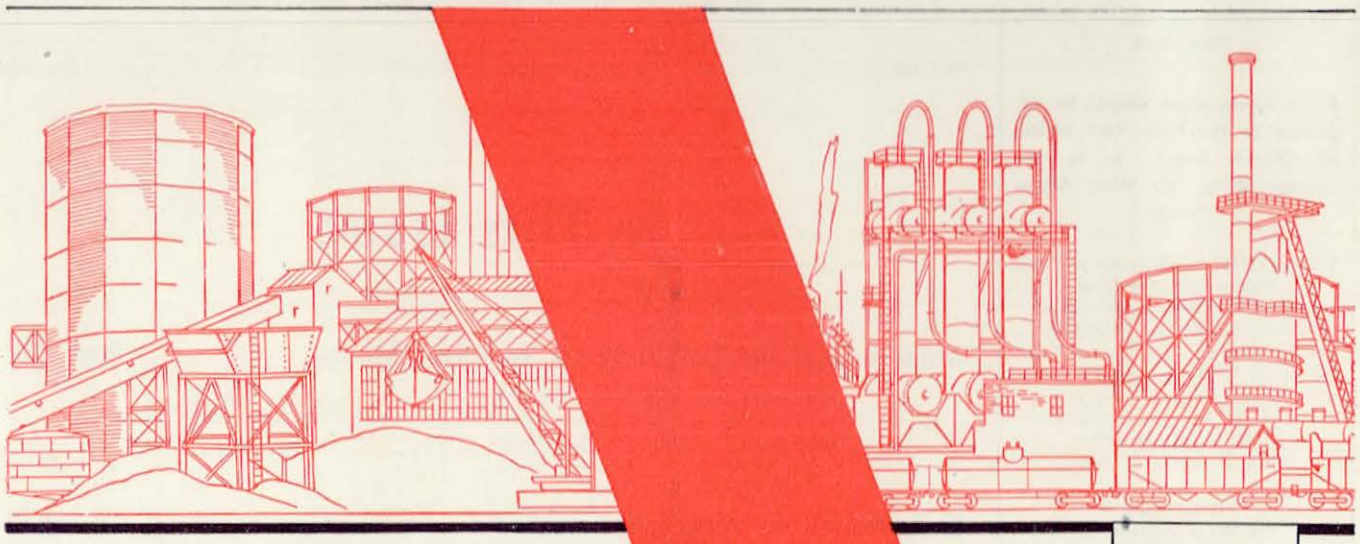
WHERE RED SIGNALS SAFETY



DR. JULIUS KLEIN, Assistant Secretary of Commerce, voiced an important fact when he said of industrial equipment:

> "The paralysis of advancing senility is all the more dangerous because its stealthy approach is so painless, so easy."

Take, for example, "senility" of metal structures due to corrosion. It comes on slowly... silently... but nevertheless surely.

To safeguard iron and steel against the stealthy approach of "senility" caused by corrosion, engineers and maintenance men paint their structures with pure red-lead. They have learned that "red signals safety" when the red is red-lead

Dutch Boy Red-Lead seals out corrosion... seals out rust... seals out the moisture and gases that attack exposed metal. A fine, highly oxidized pigment, Dutch Boy Red-Lead is supplied in two forms—paste and liquid. The paste comes in natural orange-red, is easily mixed to brushing consistency and can be tinted to dark colors. Dutch Boy Liquid Red-Lead (ready for the brush) is available in orange-red, two shades each of brown and green, and also in black.

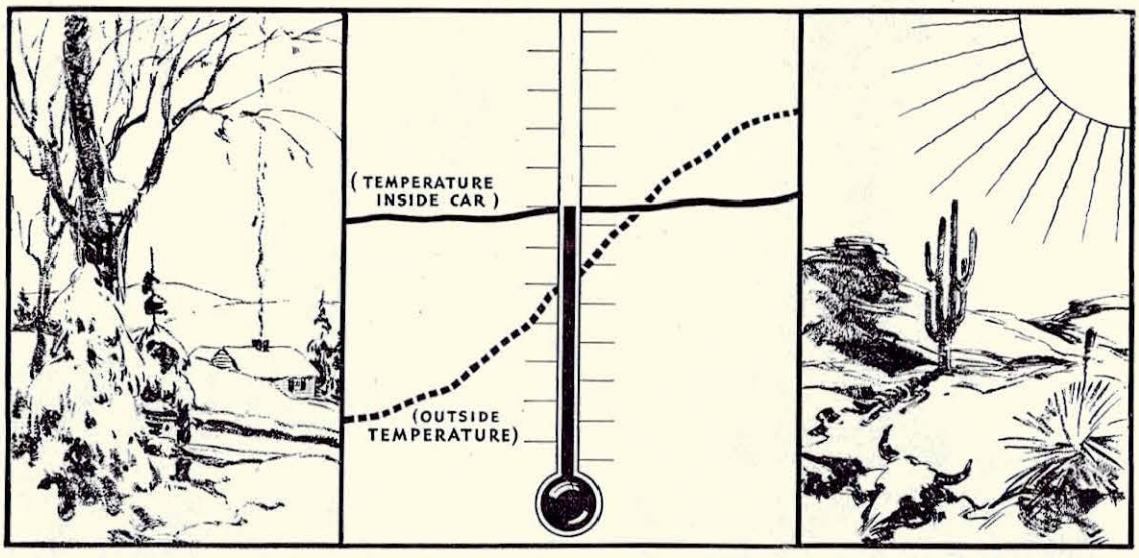
For full information about protecting metal surfaces with red-lead, write for our booklet —"Structural Metal Painting." Our nearest branch will gladly forward a copy upon request.

NATIONAL LEAD COMPANY

New York, 111 Broadway—Buffalo, 116 Oak Street—Chicago, 900 W. 18th Street—Cincinnati, 659 Freeman Avenue—Cleveland, 820 West Superior Avenue—St. Louis, 722 Chestnut Street—San Francisco, 2240 24th Street—Boston, National-Boston Lead Co., 800 Albany Street—Pittsburgh, National Lead & Oil Co. of Pa., 316 Fourth Ave.—Philadelphia, John T. Lewis & Bros. Co., Widener Bldg.

DUTCH BOY RED-LEAD

AIR CONDITIONING



The problems of air conditioning are:

First:
To furnish an abundance of clean, fresh air.

Second:
To raise or lower the temperature of the air as may be required.

Third:
To alter the relative humidity to properly correspond with the temperature and provide a maximum of comfort.

See our advertisements on this subject in the November 21 and December 5 issues.

The solutions of the problems recited above have been successfully developed for passenger cars and the air conditioning systems which we install will accomplish all of these results in your cars regardless of season—summer or winter. Since the operation of this system permits the windows to remain closed, the comfort of passengers is further enhanced by the absence of noise.

PULLMAN CAR & MANUFACTURING CORPORATION

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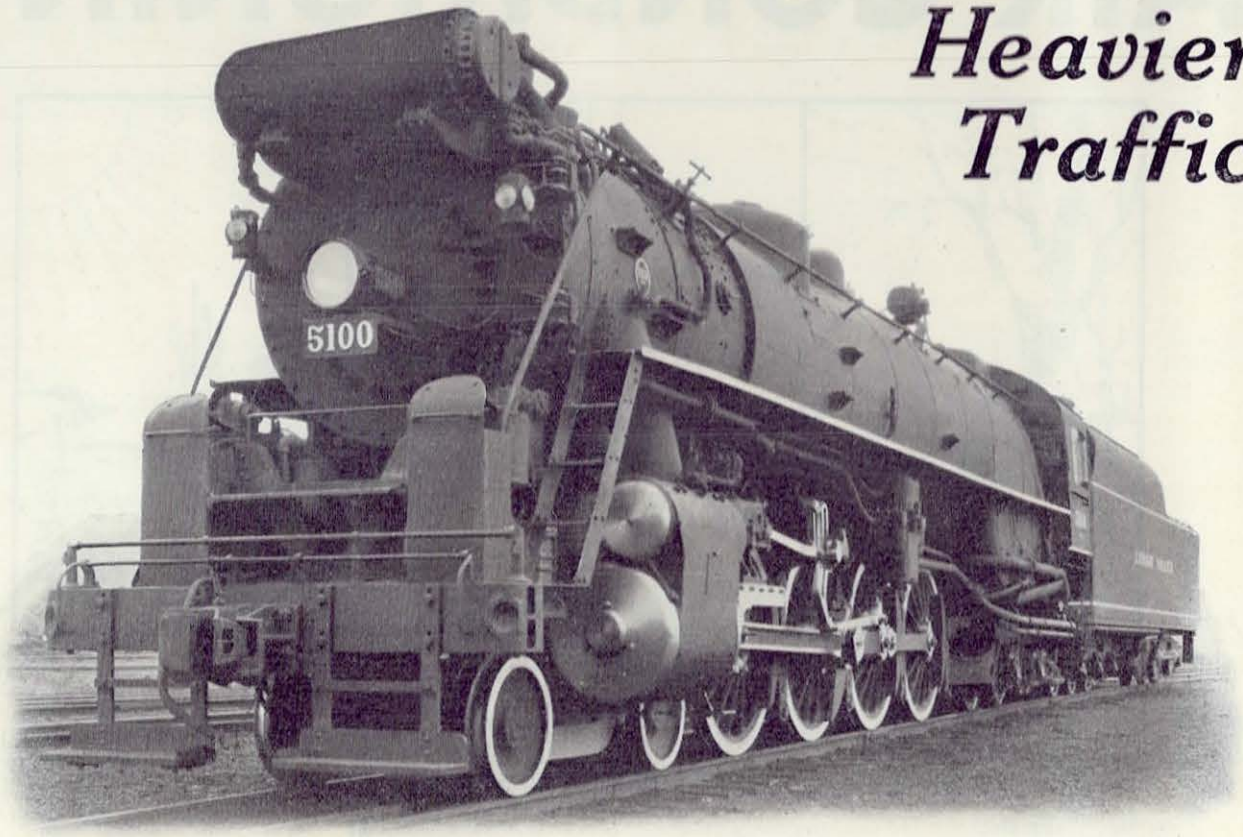
Lehigh Valley Prepares For Heavier Traffic



EARLY this year, the Lehigh Valley placed in service a trial locomotive of the 4-8-4 type built in our Shops. It was designed to handle 3000 tons from Buffalo to Jersey City on a fast freight schedule, and in operation, materially exceeded that requirement.

On the Seneca Division where the locomotive was given a series of dynamometer tests, it demonstrated its ability to handle 500 tons more than the Mikado type locomotives used in fast freight service, and to save 20 minutes on their running time.

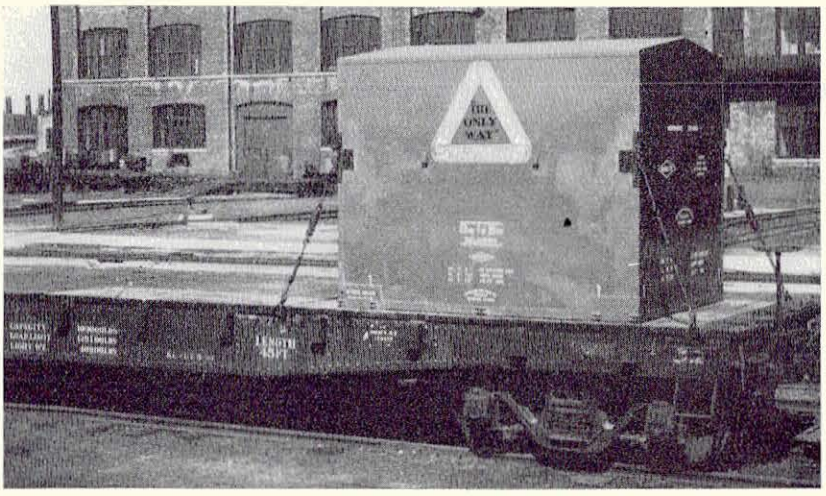
We are now building ten more for the Lehigh Valley. They were ordered because—

It takes Modern Locomotives to make money these days!

THE BALDWIN LOCOMOTIVE WORKS 1831 1931

THE BALDWIN LOCOMOTIVE WORKS
PHILADELPHIA

16 Reasons Why

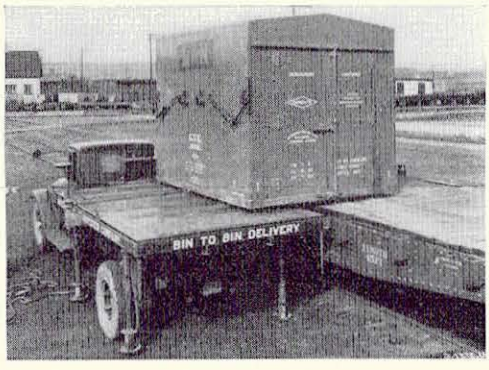


A Mt. Vernon Unit Freight Carrier loaded on standard flat car

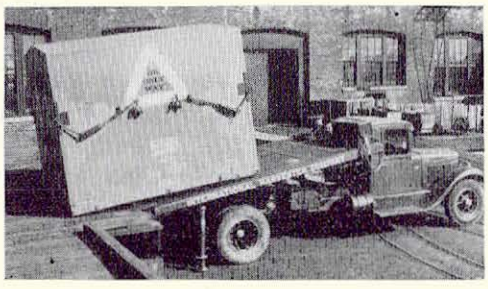
1. Makes possible a service to all shippers and all stations . . . eliminates discrimination which is condemned by I.C.C. report.
2. Universal application . . . handles 90 percent of box car freight, both carload and l.c.l.
3. Side delivery of Unit Carrier . . . eliminates truck congestion.
4. No investment in overhead crane equipment.
5. Air operated wheel jacks . . . Unit Carrier can be moved to any position on its own wheels without expensive lift trucks.
6. One-third less weight than steel container . . . no heavy attachments to flat car.
7. Reduction of impacts to cargo by 50 percent . . . impacts absorbed by spring hold down clamps.
8. No sweating because of Haskelite insulation.
9. Crating greatly reduced.
10. Reduction of internal warehouse trucking . . . Unit Carrier loaded and unloaded under shelter.
11. Claims reduced to approximately one-tenth of that on box car shipping.
12. Theft and pilferage eliminated . . . only one loading and unloading.
13. Speed in handling . . . Unit Carrier transferred from truck to flat car in three minutes.
14. Low slung weight . . . Unit Carrier rests direct on flat car floor with friction contact.
15. Financed on car trust certificate plan because special cars, trailers and cranes are not required.
16. Unit Carrier interchangeable among all roads.

For information regarding the elevating and tilting motor truck platforms communicate with the International Harvester Co. of America, 606 So. Michigan Ave., Chicago, Ill.

You Should use **Mt. Vernon** Unit Freight Carriers



Truck driver unloads the Unit Carrier on to the truck in 3 to 4 minutes. One man with this truck replaces several overhead cranes and crews.



Unit Carrier being loaded on to truck from shipping platform of medium height.

(Inventors: George R. Meyercord and Olin H. Basquin, Patents applied for)

Mt. Vernon Car Manufacturing Company

MT. VERNON, ILLINOIS

Manufacturers of Freight Cars of Every Description

Car Wheels - Castings and Forgings

Would a Reduction of 70%

In the Cost of Handling Your Locomotive Fuel Justify a New ROBERTS AND SCHAEFER Coaling Plant

ONE RAILROAD by the installation of one of our modern automatic electric coaling stations reduced its cost of supplying fuel to locomotives from 8.1c per ton in 1929 to 2.4c per ton for the first six months of 1931, or a total reduction in the cost per ton of coal handled of more than 70%.

Another Railroad for the twelve months ending in June 1931 handled its locomotive coal through one of our modern installations at an average cost of 2.35c per ton.

The above are typical of the savings which have been made by the installation of our modern coal, sand and cinder handling plants. We shall be glad to cooperate with you in the working out of facilities which will make the same attractive savings on your railroad.

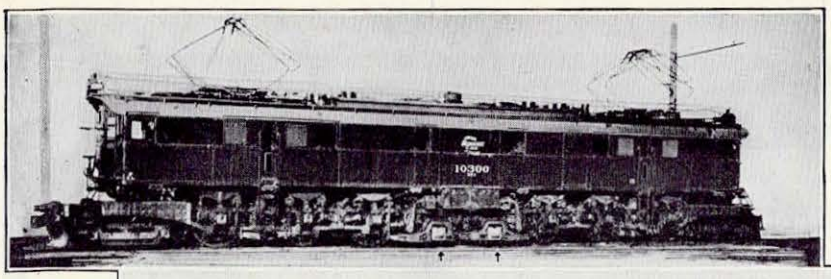
We are the exclusive builders of—

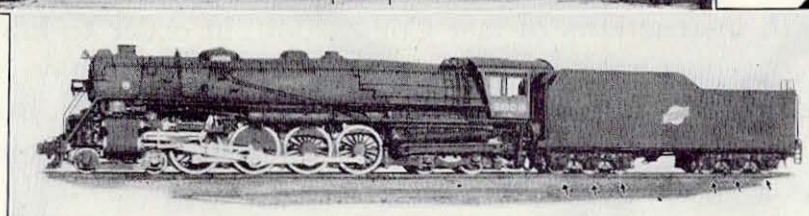
"Simplex" Locomotive Coaling Plants
"Rands Shallow Pit" Locomotive Coaling Plants
"N & W" Type Locomotive Cinder Plants
"N & W" Type Direct Engine Coalers
"Rands Gravity" Sand Handling Plants

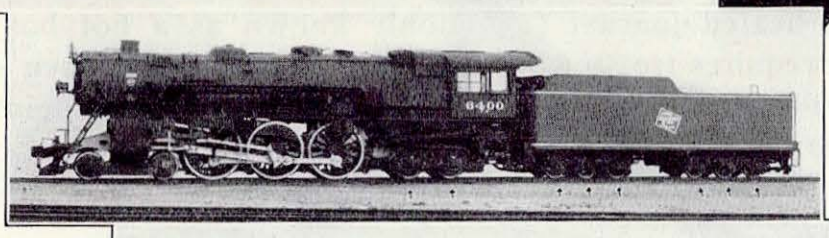
We have available at all times an experienced engineer who will be glad to confer with railroad engineers at their home offices in order to work out the most satisfactory arrangements of coal, sand, and cinder handling facilities and to submit propositions and enter into contracts covering the design and erection of such improvements.

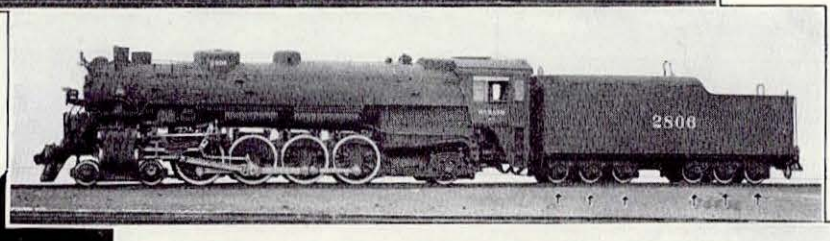
R S AND COMPANY WRIGLEY BUILDING CHICAGO

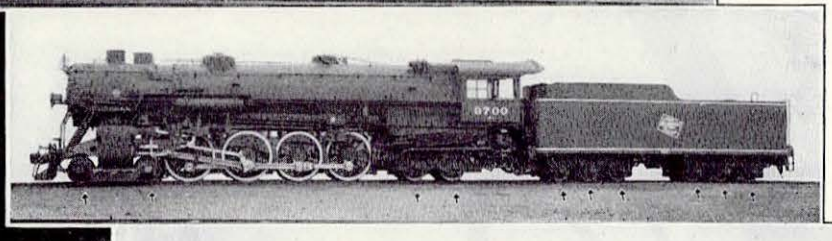
ROBERTS AND SCHAEFER CO.
ENGINEERS AND CONTRACTORS
CHICAGO, U.S.A.

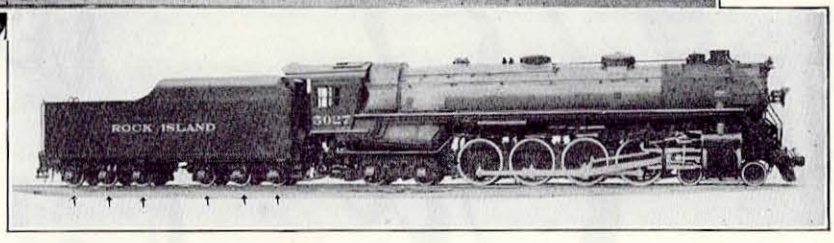


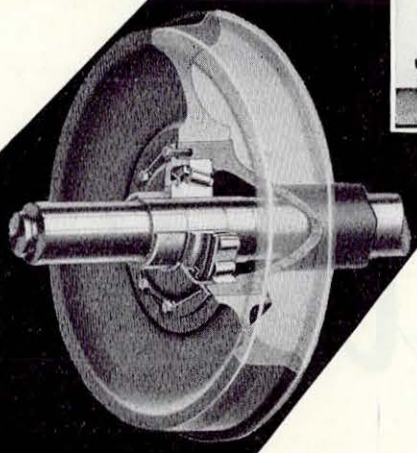












heavy loads

Roller Bearings mounted within the wheel hubs—the American Steel Foundries Roller Bearing Units—may be found in use in the locations checked on the accompanying pictures. In this service both horizontal and vertical loads are applied with suddenness and severity really trying the capacity of the bearings and their mountings—

Roller Bearing Units are being more and more widely used.

AMERICAN STEEL FOUNDRIES

NEW YORK CHICAGO ST. LOUIS

...ical to discontinue the ... back ...

Method of Reporting Hot Boxes

In accordance with instructions of last Convention, in order to have a standard method of reporting hot boxes that performances may be compared, the Committee submit the following definition of a Hot Box for incorporation in the "A. R. A. Manual of Standards and Recommended Practice," as a recommended practice:

"An overheated journal (commonly known as a hot box) is one that requires treatment or setting out of any car when such hot journal develops between originating point and point of destination of car on carrying road, irrespective of class of train or point at which car is treated or set out."

Cross it out of the book with

TIMKEN Tapered Roller BEARINGS

Ordinary sheet metal is not good enough for your passenger train cars

RAILROAD PRODUCTS

MADE BY CONTINUOUS PROCESS

Special Car Siding Sheets
Locomotive Jacket Sheets
Passenger Car Sheets and Plates
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Hot Rolled Ingot Iron and Steel Sheets
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Wrought Steel Wheels

ON THE AIR
every Monday night
the ARMCO CONCERT BAND
thru WLW—700 kc.
W8XAL—6060 kc. (short wave)
9 o'clock—Eastern Time
8 o'clock—Central Time
7 o'clock—Mountain Time
6 o'clock—Pacific Time

WHY select just any sheet metal for your passenger train cars when you can achieve smart, unblemished appearance with special Armco sheets? And at moderate cost, too. Armco sheets are not only reasonable in first cost, but they are less expensive to form and finish.

Some of the places where Armco sheets may be used to advantage are interior and exterior trim, sides, and letterboards. Every sheet is especially processed to provide the right fabricating qualities as well as a surface that will take and hold paint smoothly.

If you want to reduce costs of construction and upkeep and at the same time improve appearance, Armco sheets will help you. Write us for complete information concerning your particular requirements.

•

ARMCO RAILROAD SALES CO.

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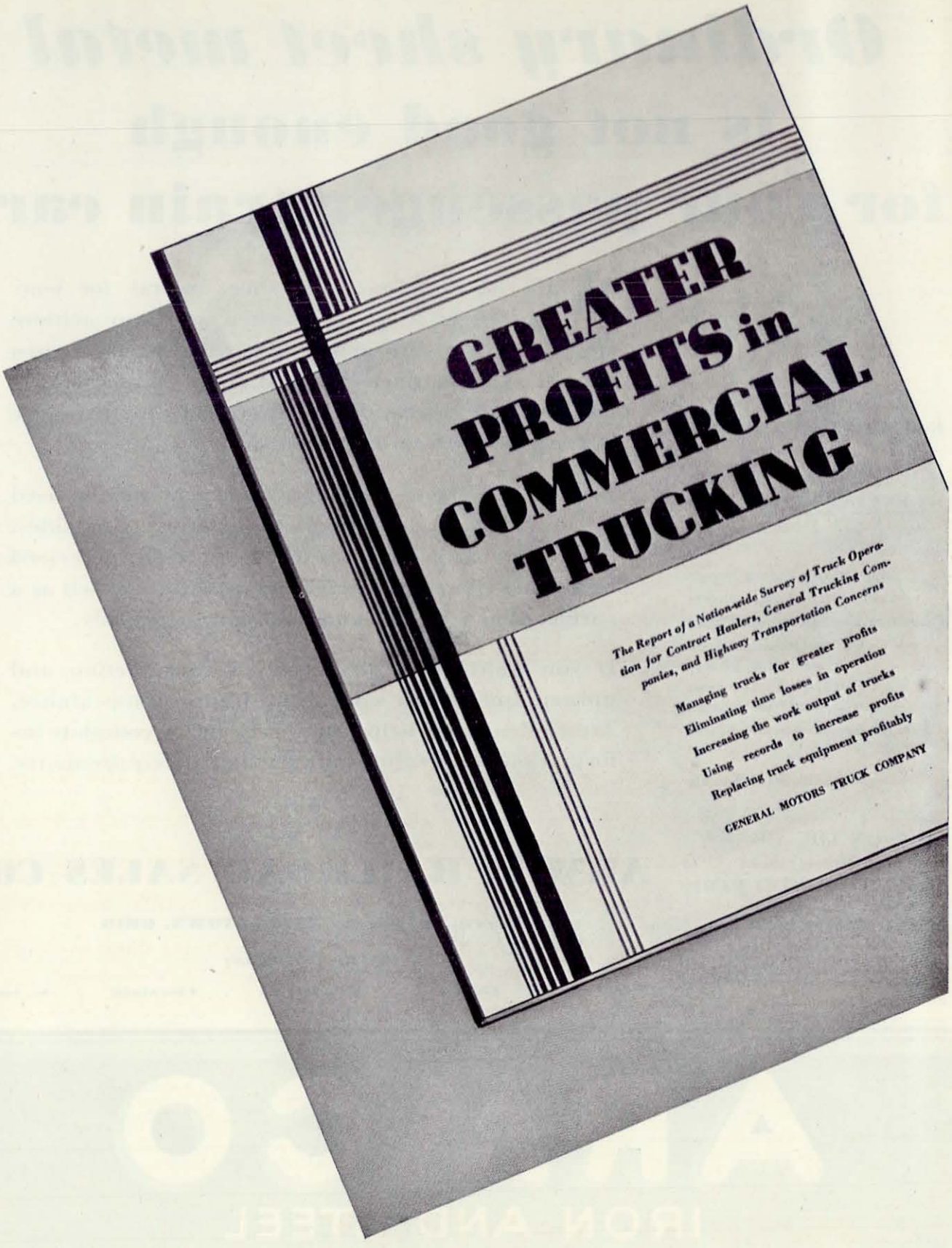
ARMCO
IRON AND STEEL
SHEETS FOR EXACTING RAILROAD USES PLATES


GREATER PROFITS in COMMERCIAL TRUCKING
The Report of a Nation-wide Survey of Truck Operation for Contract Haulers, General Trucking Companies, and Highway Transportation Concerns
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Replacing truck equipment profitably
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GENERAL MOTORS TRUCKS

AND TRUCK-BUILT TRAILERS

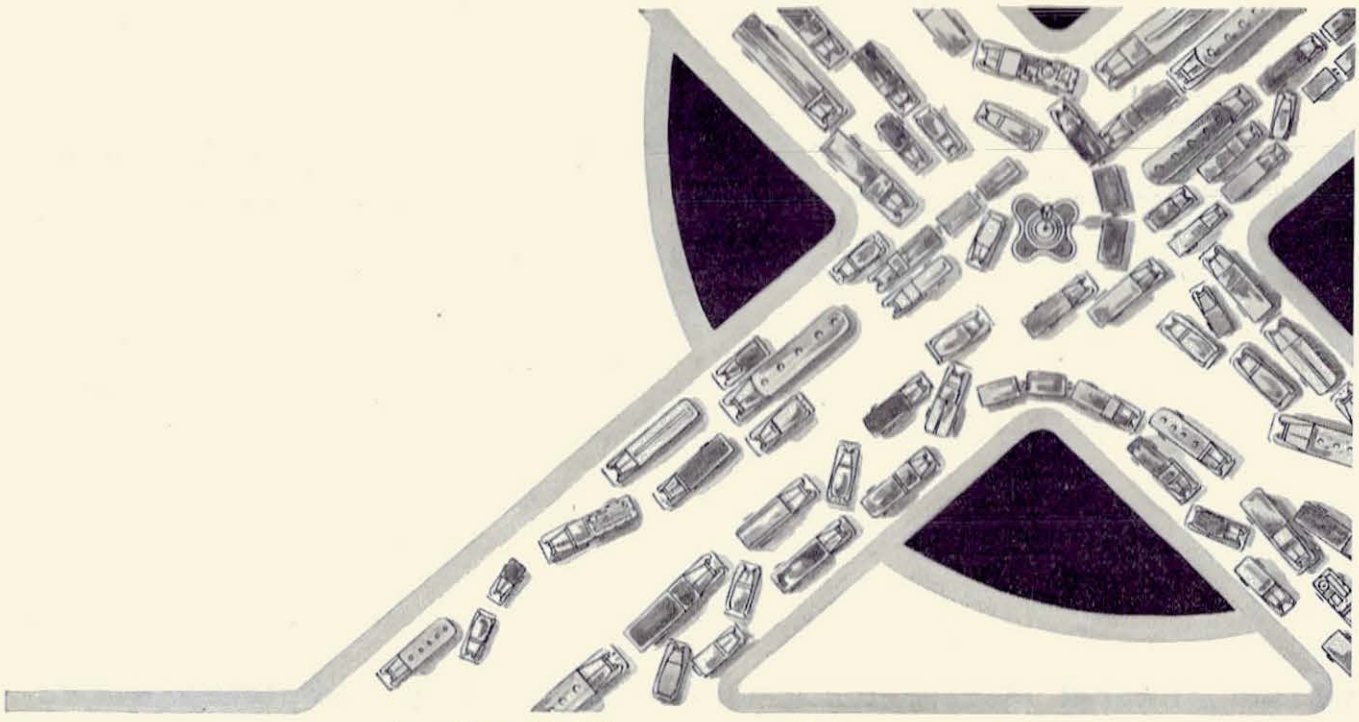
General Motors Truck Company
Pontiac, Michigan
I am interested in learning how I can cut my trucking costs. Send me "Greater Profits in Commercial Trucking." I understand that this request places me under no obligation whatever.

Name_____

Firm_____

Street_____

City and State_____



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For more than a half century, the faithful ps-s-s-st of the Air Brake has identified this world standard control in all forms of rail transportation. Today, this same voice of safety and Bendix-Westinghouse Brakes bring to the highways of the world a new conception of brake efficiency ★ Aside from their traditional safety feature, Bendix-Westinghouse Automotive Air Brakes offer a notable economy. Their smooth, positive flow of tremendous power makes faster schedule speeds safe and permits the easy handling of larger pay-loads. Lining life is also greatly increased with this modern power control. Even periods between adjustments are lengthened . . . And this is just a start ★ At your request a representative, thoroughly informed on the almost limitless advantages of Air Brakes, will be pleased to give you the entire story, with no obligation. Merely address the BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY at Pittsburgh, Pennsylvania.

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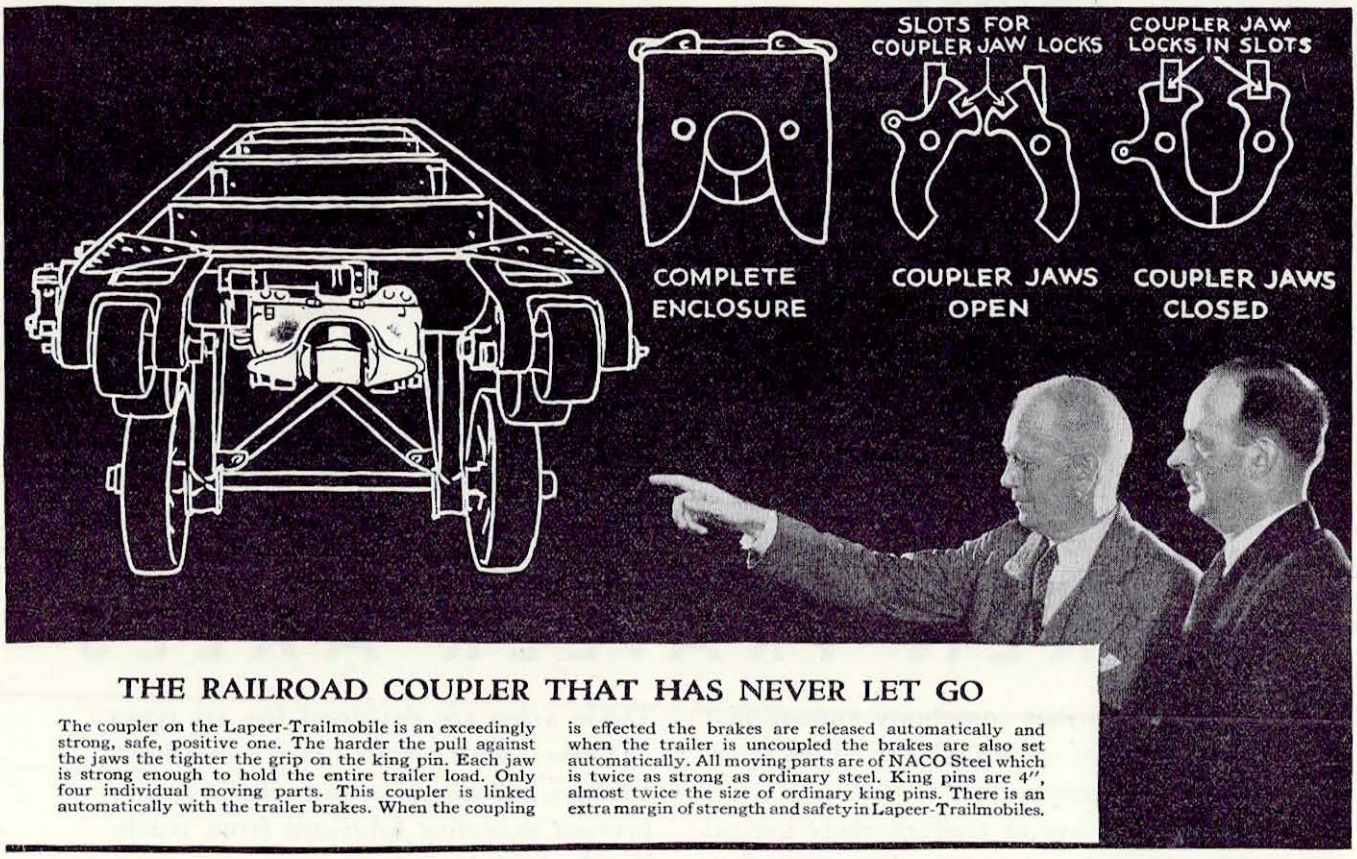
★ BENDIX ★ WESTINGHOUSE AUTOMOTIVE AIR BRAKES

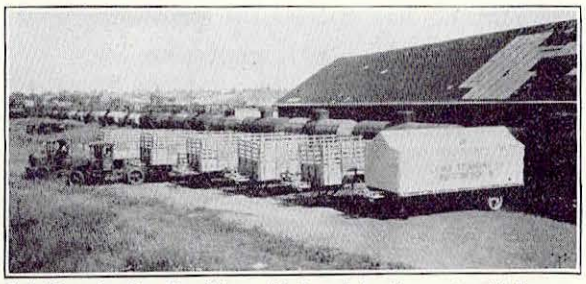
The Positive Safety of a Railroad Transportation System



THE RAILROAD COUPLER THAT HAS NEVER LET GO

The coupler on the Lapeer-Trailmobile is an exceedingly strong, safe, positive one. The harder the pull against the jaws the tighter the grip on the king pin. Each jaw is strong enough to hold the entire trailer load. Only four individual moving parts. This coupler is linked automatically with the trailer brakes. When the coupling is effected the brakes are released automatically and when the trailer is uncoupled the brakes are also set automatically. All moving parts are of NACO Steel which is twice as strong as ordinary steel. King pins are 4", almost twice the size of ordinary king pins. There is an extra margin of strength and safety in Lapeer-Trailmobiles.

THE same mechanical superiorities which make Lapeer-Trailmobile the leading auxiliary transportation system in point of economy, speed, and efficiency, also make it the safest. Consider the railroad type of coupler (see above), 100 per cent cab control to protect driver from all risks and delays of manual operation, automatic overriding brakes to equalize speed of tractor and trailer when trailer tends to override tractor, self-leveling support legs to increase safety during loading and save time — and a number of other equally progressive features which make for cheaper, faster, safer auxiliary transportation for railroads. For complete details, address: The Trailer Company of America, Cincinnati, Ohio.



Cole Teaming Co., Providence, R. I., cuts hauling costs with Lapeer-Trailmobiles.

Representatives in all principal cities

LAPEER-TRAILMOBILE

"TRAILERIZE AND ECONOMIZE"

100% CAB CONTROL . . . CHEAPER . . . FASTER . . . SAFER

GOOD?

they *have* to be . . . . .

TIMKEN TRAILER AXLES

It was time that somebody approached the subject of trailer axles from the operator's viewpoint.

Growing use of trailers, their logical place in any large-scale hauling operation, and increasing legislation as to trailer-brakes—all these factors have forced trailer axles into the engineering spot-light.

Timken has solved the problem—and it had become a real problem.

Timken Trailer Axles are of Timken quality throughout—alloy steel, properly heat-treated; with spindles and bearing seats ground to close limits.

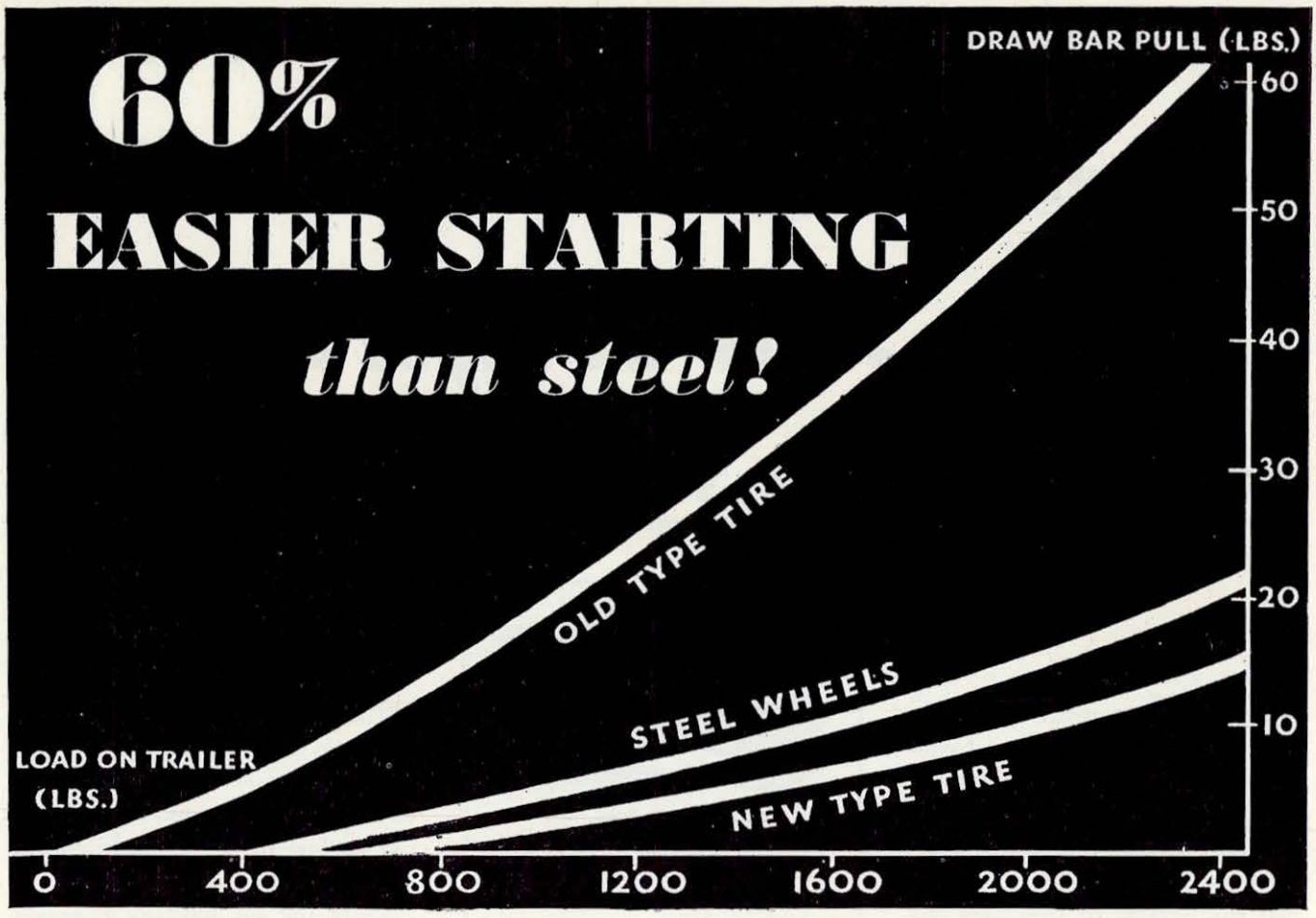
These axles are designed for all types of brakes; with *correct* brake mountings; effective hub oil-seals, and oil-slingers to prevent excessive lubricant from reaching the brakes.

Another important feature—all brake parts, hubs and bearings on Timken Trailer Axles are identical and interchangeable in the same capacities with the same parts of Timken Driving Axles—worm or bevel. This will appeal to operators owning Timken equipped trucks—big savings in inventory, greater ease and economy of maintenance.

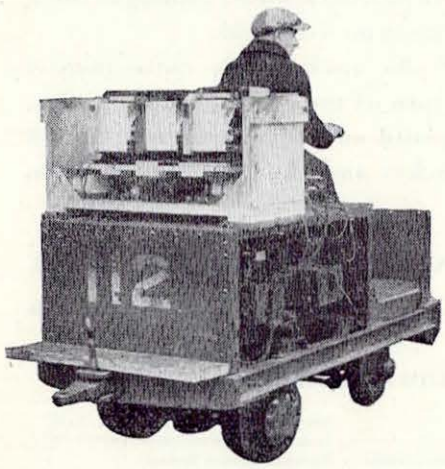
For a graphic picture of the full line of Timken Trailer Axles, write us for literature

THE TIMKEN-DETROIT AXLE COMPANY, *Detroit, Michigan*

TIMKEN AXLES



The rolling power consumption comparisons indicated on this chart were made with the same trailer and a tractor operating each time under identical conditions. The vertical reading shows the pounds of pull required—the horizontal gives the load hauled.



The instruments mounted on this tractor recorded the energy consumption when equipped with steel wheels, old type, and new-type Goodrich *Low Power* Industrials.

New Goodrich Industrials roll easier . . . give increased cushion . . . greatly reduce power consumption

THE stock arguments for rubber tires on trailers are well known. Reduced wear and tear on load, equipment and floor—quieter operation—improved traction—economical replacements were among their advantages.

For these reasons alone installation of old-type trailer tires paid many times over on the average operation.

But there was one big drawback . . . the old-type tire was harder to start rolling—harder to keep rolling than steel wheels. It consumed more power.

Now this obstacle has been overcome. Goodrich engineers have perfected a new trailer tire—the Goodrich *Low Power* Industrial—that gives, by test, *60% easier starting than steel wheels—reduces the rolling effort 33-1/3%.*

Not only does this remarkable tire start easier—roll easier and wear longer than steel; *it actually gives greater cushion—has 2.6 times the resiliency—requires only 1/5 the starting, or drawbar pull, of the old-type trailer tires.*

In the light of this new development we strongly urge that you investigate now, regardless of your present trailer wheel equipment, the important advantage and economy of Goodrich *Low Power* Industrials. The B. F. Goodrich Rubber Co., Est. 1870, Akron, Ohio. Pacific Goodrich Rubber Co., Los Angeles, California.

Goodrich

INDUSTRIAL TIRES

SPECIFY GOODRICH

International Harvester

begins its Second Century

. . in High!

with Trucks at *NEW* Low Prices . .

This illustration shows the 3-ton International Model A-5. International Harvester offers a full line of trucks ranging from ¾-ton to 5-ton.

Ask for a demonstration of the new 1½-ton, 4-speed Model A-2 at

$615

chassis, f. o. b. factory

INTERNATIONAL HARVESTER this year celebrates a century of continuous history—a hundred years of quality manufacture, including thirty-two years of automotive development.

At the bottom of this page are listed some of the organizations a century old, and older, that are owners of International Trucks. It is only a partial list, but it includes a national government or two; some of the oldest cities, railroads, daily newspapers and banks; and the most historic commercial houses on this continent. Most of the great modern corporations are not eligible to this list, not for any lack in trucks, but only because they have not reached the century mark. As a matter of fact, the majority of the industrial leaders of America do own Internationals—in fleets large and small, totaling tens of thousands of trucks.

Time brings experience, and experience has brought outstanding success to International Trucks. Today this Company ranks high among the leaders in truck manufacture, making both speed and heavy-duty models for all hauling requirements. Its record is convincing proof of owner satisfaction. International Harvester begins its second century better equipped than ever to provide low-cost hauling to truck users in every field.

We invite your close inspection of today's line of attractive, well-built trucks, sold and serviced through 183 International branches and thousands of International dealers.

INTERNATIONAL HARVESTER COMPANY
OF AMERICA
(INCORPORATED)

606 So. Michigan Ave. Chicago, Illinois

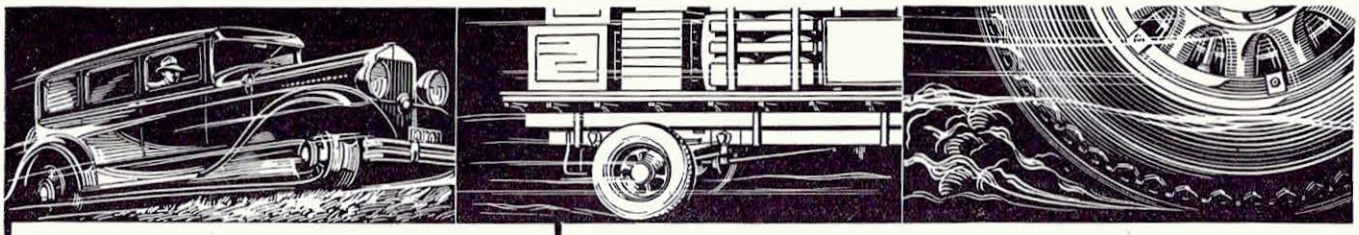
Some of the Century-Old Organizations Owning International Trucks

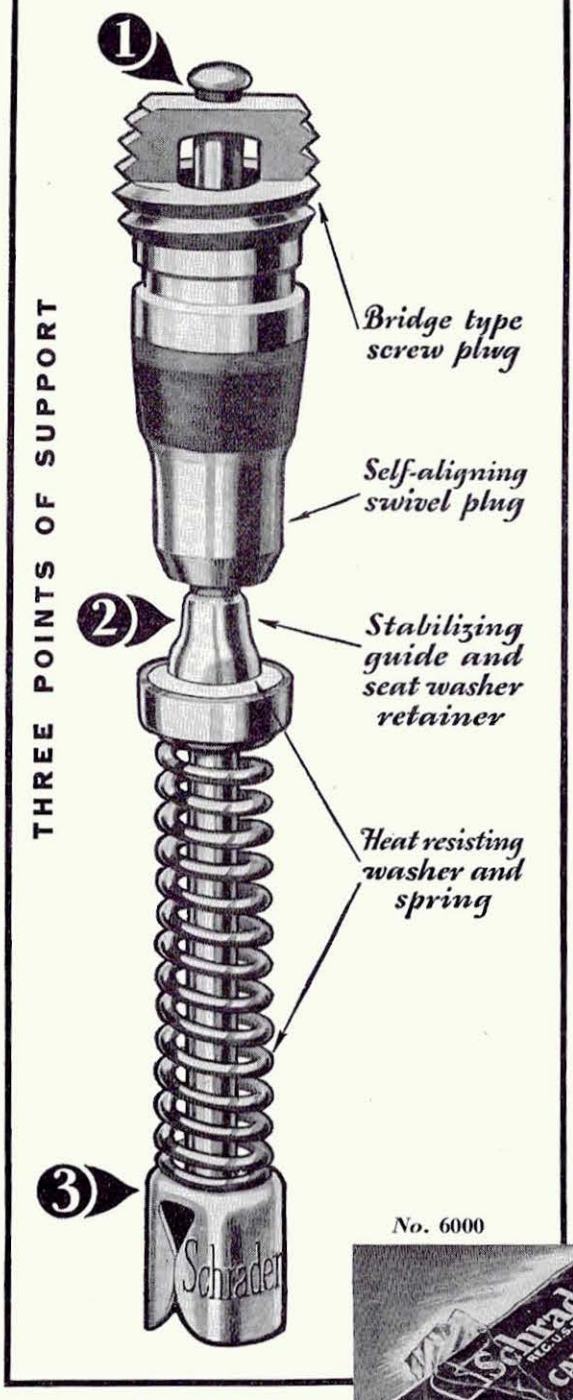
American Soap & Washoline Co., Cohoes, N. Y.
City of Atlanta, Ga.
Baltimore & Ohio Railroad
City of Baltimore, Md.
Bornot, Inc., Philadelphia, Pa.
City of Cincinnati, O.
City of Columbia, S. C.
Consolidated Gas Co., New York, N. Y.
C. H. & Geo. H. Cross, St. Johnsbury, Vt.
Dominion of Canada
Funk Bros. Seed Co., Bloomington, Ill.
Patrick Hackett Hardware Co., Inc., Ogdensburg, N. Y.
Harrisburg Telegraph-Press, Harrisburg, Pa.
R. Hoe & Co., Inc., New York, N. Y.
J. M. Huber, Inc., Brooklyn, N. Y.
Hudson River Night Line, New York, N. Y.
Hudson's Bay Company
City of Jacksonville, Fla.
Mackintosh-Hemphill Co., Midland, Pa.
City of Memphis, Tenn.
Mollineaux Bros., Inc., Hempstead, N. Y.
City of New Orleans, La.
City of New York, N. Y.
New York Central Railroad
New York, New Haven & Hartford Railroad
Pennsylvania Railroad
Philadelphia Inquirer
Philadelphia National Bank
S. S. Pierce Co., Boston, Mass.
Pittsburgh Post-Gazette
Reeves, Parvin & Co., Inc., Huntingdon, Pa.
G. W. Richardson & Son, Auburn, N. Y.
City of Richmond, Va.
St. Mary's of the Springs, Shepherd, O.
St. Vincent De Paul Society, Milwaukee, Wis.
Simpson & Morehead, Inc., Troy, N. Y.
P. A. & S. Small Co., York, Pa.
Southern Railway System
Steinman Hardware Co., Inc., Lancaster, Pa.
John L. Thompson & Sons Co., Inc., Troy, N. Y.
United States of America
John Wanamaker, New York, N. Y.
Warner Company, Philadelphia, Pa.
City of Washington, D. C.
James Y. Watkins & Sons, Inc., New York, N. Y.

INTERNATIONAL TRUCKS

SPECIALLY DESIGNED FOR TODAY'S

FASTER DRIVING ◆ HEAVIER LOADS ◆ HIGHER TIRE HEAT





Be sure it's a Schrader—Look for the name

THE NEW SCHRADER "CAIR-FREE" VALVE CORE IS NOW THE STANDARD OF THE TIRE INDUSTRY

So MUCH better, stronger, more dependable and longer-lasting has the new Schrader "Cair-Free" Valve Core proved itself that it is already recognized as the new standard valve core of the tire industry.

Such endorsement is the highest a tire accessory can have. No better evidence could be offered that Schrader "Cair-Frees" are likewise the valve cores for replacement purposes.

The faster inflation of tires with Schrader "Cair-Frees" means time saving—in the shop and on the road. Their ruggedness means longer valve-core life and fewer replacement tasks. Their dependability for preventing air leaks through the valve means better maintenance of air pressure—and, consequently, greater tire mileage.

Use Schrader "Cair-Frees" when replacing valve cores. Keep a supply in your service department. The help these mites of equipment render toward holding down bus operating expenses is almost incredible when compared with their insignificant cost. Order through your regular supply house. A. Schrader's Son, Inc., Brooklyn, Toronto, London.

No. 6000

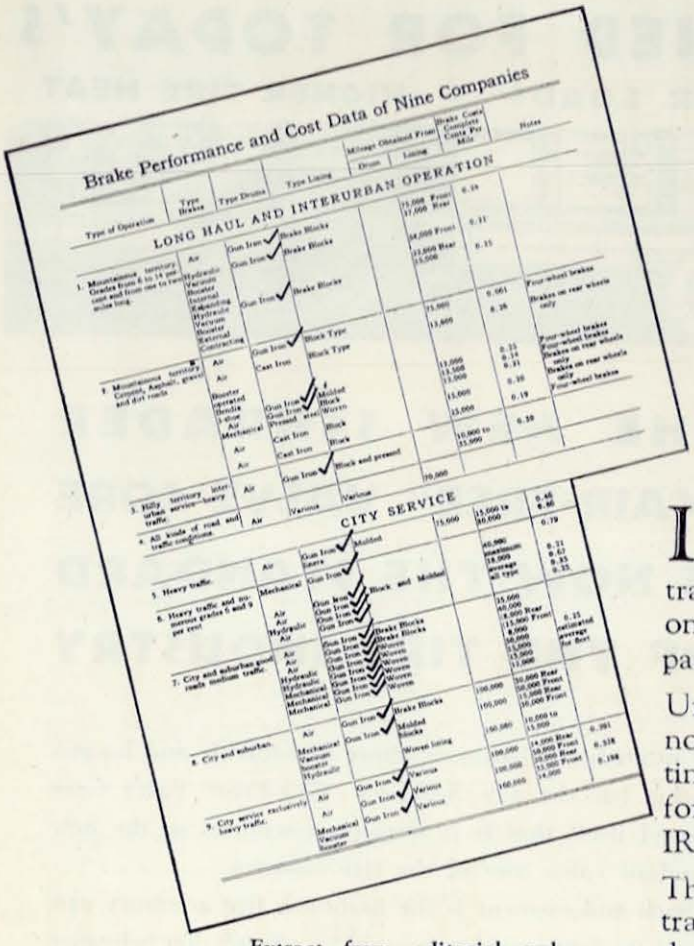
Schrader

Reg. U. S. Pat. Off.

Makers of Pneumatic Tire Valves since 1844

TIRE VALVES TIRE GAUGES

"CAIR-FREE" *on Cellophane-wrapped box identifies the new Schrader Valve Core package*



Brake Performance and Cost Data of Nine Companies

LONG HAUL AND INTERURBAN OPERATION

CITY SERVICE

Extract from editorial published in June, 1931, issue of Bus Transportation.

Over 80% HSGI

IN reply to a questionnaire, prepared to determine the cost of brakes per mile, nine bus transportation companies submitted the thirty-one performance records listed in the accompanying table.

Under the heading "Type Drum" it will be noted that "Gun Iron" is listed twenty-six times. This, of course, is an abbreviated term for "HUNT-SPILLER *Air Furnace* GUN IRON."

This data signifies the trend in the automotive transportation industry. Operators throughout the country are taking advantage of the lower overall brake costs which are assured through the use of HUNT-SPILLER *Air Furnace* GUN IRON Brake Drums.

Greater service from the Brake Drums—more mileage from brake lining—fewer adjustments and less time in the repair shop are some of the major HUNT-SPILLER *Air Furnace* GUN IRON economies which insure greater profits from motor transport equipment.

Why take chances when HUNT-SPILLER Brake Drums insure safer operation and at the same time reduce maintenance costs?

HUNT-SPILLER MFG. CORPORATION
J. G. Platt, Pres. & Gen. Mgr. V. W. Ellet, Vice-President.

Office & Works
383 Dorchester Ave. South Boston, 27, Mass.

Canadian Representative: Joseph Robb & Co., Ltd., 997 Aqueduct St., Montreal, P. Q.
Export Agent for Latin America:
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HSGI
Reg. U. S. Trade Mark

Brake Drums
Cyl. Replacement Sleeves
Clutch Plates
Pistons

HUNT-SPILLER *Air Furnace* GUN IRON

World's largest group *of Diesel Electric Locomotives* uses Gargoyle lubricants

The group of 44 Diesel-electric locomotives used by the New York Central Railroad for road and yard service represents more than one-third of the total number of such locomotives in existence. One 128-ton locomotive, in yard-switching service for more than two years, did such satisfactory work that 41 more were purchased.

It is highly significant to railroad executives that the successful operation of this new type of power has been achieved with Gargoyle lubricants exclusively. The Vacuum Oil Company lubricates the great majority of this same type of equipment operated by other railroads—as well as the majority of stationary and marine Diesels used throughout the world.

Address Railroad Department, Main Office, 61 Broadway, New York. Branches and distributing warehouses throughout the world.

GARGOYLE

Railroad Lubricants

The world's quality oils and greases
for railroad lubrication

VACUUM OIL COMPANY, Inc.

The New D & H Box Cars
are equipped with
HUTCHINS
Channel Steel Ends
and the
UNIVERSAL
Dry Lading Roof

Hutchins Car Roofing Company

RAILWAY AGE

"Big Business" and the Railways

What is the real attitude of "big business" toward socialistic policies? What is its real attitude toward government in business? What, in particular, is its real attitude toward the railroad problem? Is it in favor of government ownership of railways? Is it in favor of socializing the railways, while leaving them under private ownership? Is it opposed to government-aided competition with private business in general, or merely opposed to government-aided competition with some industries while in favor of government-aided competition with the railways?

These questions are raised by policies recently adopted by the National Industrial Traffic League. This organization has almost 900 members, of which about 250 are traffic representatives of commercial organizations and other associations of shippers, and about 630 are traffic representatives of individual industrial or commercial companies. Its members, in other words, are the men who specialize on traffic and transportation problems for the industry and commerce of the country, and include over 50 men who represent companies that belong to the Railway Business Association. The heads of large industrial and commercial companies determine the polices affecting the relations between government and business actually or ostensibly favored by such organizations as the Railway Business Association, the National Association of Manufacturers and the Chamber of Commerce of the United States. Is the real attitude of big business toward the railroads indicated by the general policies regarding government in business sponsored by these organizations of the "bosses" of big business, or by those sponsored by the National Industrial Traffic League, which includes the traffic representatives of big business?

The N.I.T. League and the Rate Case

There have been dissensions recently within the National Industrial Traffic League. The cleavage of opinion has been principally between the traffic managers of chambers of commerce and the traffic managers of individual companies. The former, although a minority, have for years dominated the organization and its policies, and recently there has been open rebellion against their domination. A wide division of opinion developed in the league's executive committee regarding the position it should take with respect to the railways' recent application for a general advance in rates. There has been also a division of opinion regarding the attitude it should assume toward the railway executives' "Declaration of Policy" concerning the subsidization and regulation of competing means of transportation. The result in each instance has been a decision to take a stand against the railroads. Have these decisions really reflected the attitude of big business toward government in business, and especially toward the railroad problem?

The executive committee of the league, in a largely attended meeting, originally voted by a small majority that it should not appear either for or against the recent application of the railways for a general advance in rates. Later, however,—in fact, on the very day before the hearings began—it voted, at a meeting in Washington attended by a much smaller number of its members that the league should be represented. The following appears in the opinion of the commission: "Luther M. Walter, R. C. Fulbright, W. J. Mathey, R. W. Poteet, Charles R. Seal, H. J. Wagner, W. H. Chandler, W. H. Day and Herman Mueller for the National Industrial Traffic League". Two of the men mentioned are lawyers, six are representatives of commercial organizations and one is traffic manager of a manufacturing company. One of the lawyers, Mr. Walter, introduced in the hearings a plan for pooling any revenues resulting from an advance in rates, and distributing them as gratuities in proportion to the needs of the various railways, and this plan the Interstate Commerce Commission adopted. There is a persistent rumor that the suggestion that the league should inject the plan into the hearings was first made by a very influential member of the commission, and that, anticipating its adoption, representatives of the league introduced it to show by the outcome how much influence it and its lawyers have with the commission. It has become notorious that many members of the league regard the pooling plan with great disfavor and strongly condemn those responsible for its having been sponsored by their organization.

Does "Big Business" Favor Pooling Earnings?

What do the heads of large industrial and commercial companies, and even of large commercial asso-

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Whom Does the League Represent?

The railway traffic that is most exposed to truck competition is miscellaneous and less-than-carload freight. The traffic departments of chambers of commerce usually are dominated by shippers of these kinds of freight. At the session of the league at which these "fundamental principles" were endorsed there were present only about seven per cent of its total members and most of these were representatives of chambers of commerce. Apparently the league's attitude toward competition between trucks and the railways has been determined much more largely by the supposed interests of shippers of less-than-carload and miscellaneous freight than by the real interests of the shippers of the vastly larger volume of other commodities.

We do not believe that the "fundamental principles", with all that they imply, which were adopted at a rump session of the National Industrial Traffic League last week express the views of American business regarding the government policies that should be applied to the railways and other means of transportation. We are sure that the socialistic plan of pooling railway earnings which was injected into the recent hearings before the Interstate Commerce Commission by supposed spokesmen for the league not only does not reflect the views of leaders of business regarding the way in which the railways should be regulated, but that it does not represent the views of a large majority of the members of the National Industrial Traffic League. If this organization is going to be allowed in future to pretend to present the views of the industry and commerce of the country regarding transportation problems to the Interstate Commerce Commission and the public the leaders of industry and commerce should take it in hand and compel it actually to present the real views of industry and commerce, and not merely those of a minority of its members who seem to be influenced principally by a desire to promote the interests of shippers of less-than-carload and miscellaneous freight at the expense of shippers of other commodities, and to curry favor with certain members of the Interstate Commerce Commission.

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The terrific burden of taxation upon American industry and agriculture is imperfectly realized. Still less does the tax-paying public understand how large a proportion of this heavy burden is attributable to highway expenditures. A chart prepared by Samuel S. Wyer, consulting engineer, of Columbus, Ohio, and issued by the Fuel-Power-Transportation Educational Foundation of that city presents a picture of the situation in a strikingly graphic manner and is reproduced on page 825 herein.

Mr. Wyer bases his chart on data compiled by the United States Bureau of Public Roads, and this data, as supplied by him, we also publish with the chart. Mr. Wyer made a study of state highway bond issues in 27 states and found that the average life of over

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The terrific burden of taxation upon American industry and agriculture is imperfectly realized. Still less does the tax-paying public understand how large a proportion of this heavy burden is attributable to highway expenditures. A chart prepared by Samuel S. Wyer, consulting engineer, of Columbus, Ohio, and issued by the Fuel-Power-Transportation Educational Foundation of that city presents a picture of the situation in a strikingly graphic manner and is reproduced on page 825 herein.

Mr. Wyer bases his chart on data compiled by the United States Bureau of Public Roads, and this data, as supplied by him, we also publish with the chart. Mr. Wyer made a study of state highway bond issues in 27 states and found that the average life of over

one billion dollars of such bonds was 21.4 years. This, he points out, is a much longer period than the average life of the highways built from the funds raised by the sale of these bonds. The highways wear out and have to be replaced while the bonds remain unpaid. Highway bonds should, says Mr. Wyer, conform to prospective highway life and mature in ten years. From this logical assumption he proceeds to the conclusion that we are piling up a huge and growing deficit over and above the enormous published totals of highway construction and maintenance costs. Thus, the rural highway bill for 1929—apparently just short of 1400 millions—actually reached the appalling total of two billions; less than 700 millions, or only 35 per cent, of which was paid by highway users. Bad as this situation is from the standpoint of the taxpayers, it is made even worse by the fact that funds invested in highways yield no taxes, as they would if they were not so diverted and instead were invested in homes, farms or industries.

The inequity of the distribution of the cost of rural highways is still further accentuated by the fact that, in most states, motor vehicle license fees and gasoline taxes are assessed on the same basis against vehicles which confine their operations to cities as they are levied upon those which use the rural highways. Thus it is not only the general taxpayers who are dealt with unjustly, but also those bus and truck operators and the considerable number of automobile owners who use the rural roads rarely if at all.

Along with Mr. Wyer's chart and supporting data we also reprint a short article which was published with this chart in the Ohio Farm Bureau News, the official organ of the Ohio Farm Bureau Federation. This article shows an encouraging understanding of the true nature of this problem and is in welcome contrast to the subservience to truck and bus interests shown some months past by several agricultural organization spokesmen in Washington.

The National Grange at its recent meeting devoted some attention to the matter of taxation, favoring a broadening of the basis, and wisely recommended no added burdens on real estate. It likewise, through its executive committee, opposed the proposed freight rate increase which it characterized as an "added tax of approximately $25 a farm." If this organization, and others like it, would devote some of the attention they now lavish on the cost of rail transportation to a study of the cost to them, in taxes, of highway transport, their eyes might be opened to a much more profitable field of endeavor for advancing the interests of their members. The Ohio federation has pointed the way for other farm organizations.

Highway Taxes and Railway Rates

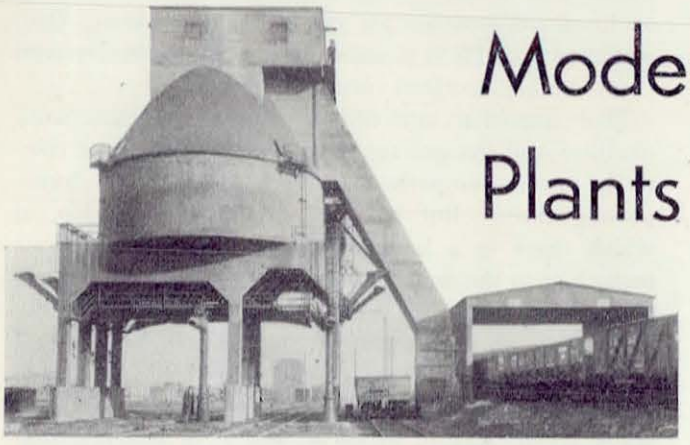
Under the monopoly theory of railroad rate making —charging what the traffic will bear, but not so much as to be unreasonable and not less than out-of-pocket costs—basic commodities are favored at the expense of higher priced manufactured goods. The average railroad rate, as is generally known, is about one cent per ton per mile. Under the plan of rate making thus far followed, high grade commodities are assessed rates many times larger than this, while rates on basic commodities are depressed much lower than would be possible if it were not for the profits derived from the higher rated classes of traffic.

Most important agricultural products are basic commodities and charges for their transport are kept relatively low in comparison to the actual costs of transporting them. But it is the higher rated traffic, in which there is a larger element of profit, which is being lost to the trucks, whose business is made possible by the taxpayers' kind assistance. Is there any alternative, if such business continues to be diverted to the highway, but higher rates for basic low-rated commodities?—That is, of course, provided the railways are to stay in business, and it is assumed that they are, since it seems scarcely likely that a form of transport which hauls freight for one cent a ton-mile, all costs included, will be abandoned in favor of one the costs of which, taxpayers' contributions omitted, are four or five times as high.

Thus is our entire system of private enterprise being oppressed by taxation, and by highway taxation in particular. And the subsidies paid by the taxpayers to such transport are not only onerous in themselves, but, if they persist, cannot but lead to the abandonment of the favoritism heretofore shown basic commodities in railroad freight tariffs. Producers of grain, livestock, coal, ore, lumber, may view with equanimity the prospect of paying in future a higher proportion of the costs of transport than they have paid in the past. But we fail to understand how they can afford to do so. And there would be no need for them to face this eventuality if they would insist that commercial use of the rural highways be placed on a self-supporting basis.

* * *

Courtesy D. L. & W. R. R.
The Main Line of the Delaware, Lackawanna & Western, Hoboken, N. J.—The Skyline of Lower New York Is Visible at the Right, Directly Over the Lackawanna's New Terminal Warehouse



A 900-Ton Coaling Station Designed to Handle Three Kinds of Coal

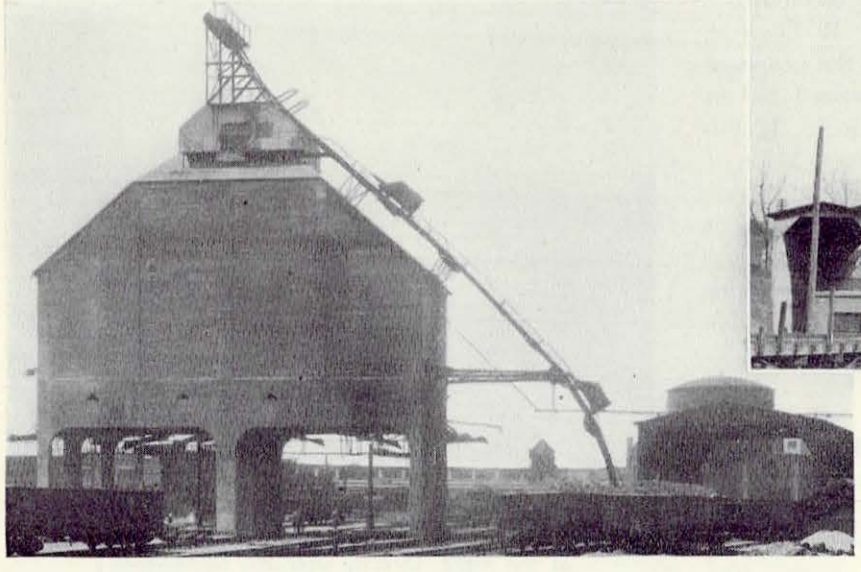
Modern Coal and Cinder Plants Will Save Money

Marked improvements in facilities for engine service offer expanded field for economy

A MECHANICAL coaling station, constructed in conformity with current practice for coaling station design, will deliver coal to locomotives with less breakage or segregation, less loss of locomotive time and at a lower cost per ton of coal handled than is possible with any of the older type of coaling facilities that are still in use. Of course, a coaling station costs money, the interest and amortization charges for which must be applied to each ton of coal delivered, so it goes without saying that an investment in new coaling facilities cannot be justified unless the demand for coal exceeds some minimum tonnage. But with the advent of the engine coaler, a coaling station without overhead storage, this minimum has been forced down to a point where the installation of mechanical coaling stations can frequently be justified with a daily demand of not over 30 tons—sometimes less.

Changes in Operating Arrangements

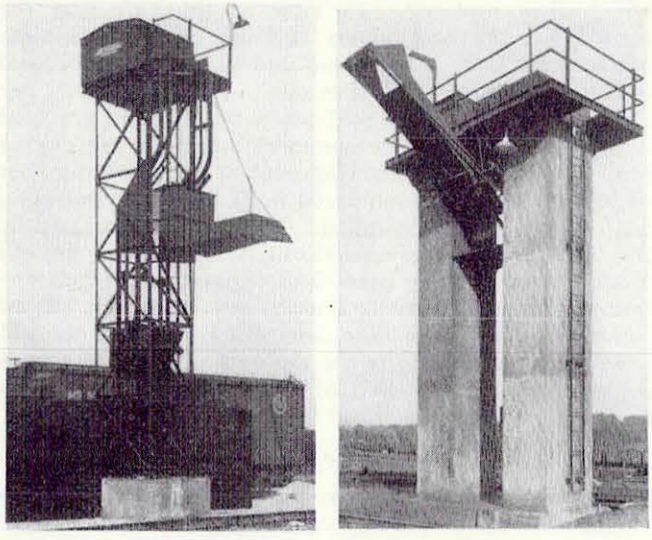
The mechanical coaling station is not new, but marked improvements in the design and perfection of machinery have been effected in recent years. This same comment holds true also of modern cinder handling plants and locomotive sanding facilities, and as the railways have installed these new facilities for locomotive service they have effected marked economies in operation. But this does not mean that the field for further developments has been exhausted. Not a few of the old trestle-type stations are still being maintained in service at high expense for upkeep. At other points makeshift facilities gotten together as a temporary expedient have been made to suffice long after the tentative date for their replacement with up-to-date plants. But there are also many existing mechanical plants that do not fulfill the demands for maximum economy. Not only have some of the older plants been rendered obsolete in the light of the more recent improvements in design and practice, but changes in operating arrangements have interfered seriously with the effectiveness and adequacy of existing facilities, even the thoroughly modern ones.



Examples of Modern Coaling Facilities: The Station on the Left Delivers Coal on Six Tracks

Chief among these disturbing factors are longer engine runs, lengthened engine districts and larger coal bunkers in engine tenders, which have had the effect of increasing the demand for coal at some points and of decreasing or entirely eliminating the demand at other places. The movement for a reduction in the number of stops for locomotive water and coal service on the line, which is the prime object of larger tenders, has given rise to programs for the concentration of service facilities at a smaller number of points. And as this entails a consideration of the problem of water service as well as the coaling stations, and it is not always possible to develop an adequate water supply at the site of an existing coaling station, an entirely adequate coaling facility is sometimes rendered obsolete.

A somewhat different situation prevails when an engine terminal is abandoned, for while the water supply



Two Types of Locomotive Coalers

developed for terminal use is almost invariably adequate for the subsequent road demand at that point, a coaling station on the enginehouse lead cannot function satisfactorily as a roadside facility.

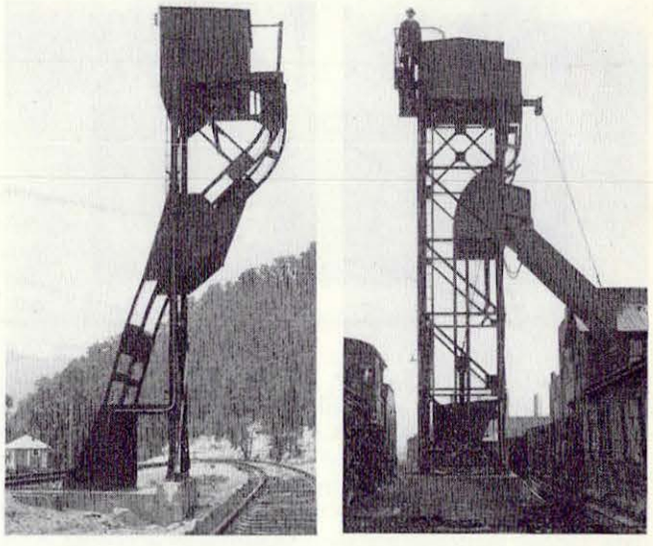
However, entirely aside from these examples of obsolescence by reason of operating changes, the fact remains that there are still many coaling plants in operation that have outlived their usefulness. The old trestle type of coal chute not only entails the manual handling of the coal at a cost ranging from 18 to 24 cents per ton, but owing to its age gives rise also to constantly mounting maintenance expenditure. It is also extravagant in the occupancy of land that could well be applied to other uses and permits of the delivery of coal to locomotives on only two tracks. Furthermore, it is not readily adapted to any plan for the development of a flexible engine terminal layout that permits of the ready movement of the maximum number of locomotives from one servicing unit to another.

The Locomotive Crane

The marked versatility of the locomotive crane has given rise to its use with the clamshell bucket in handling both coal and cinders. In a few isolated cases the crane has been employed to coal locomotives direct from cars. In others it replenishes an open top storage bin. The crane and clamshell have proved of inestimable value in emergency service—to take the place of a coaling station destroyed by fire or out of service because of a breakdown. They have also provided the cheapest and most practical means of coaling engines at a point of temporary demand or where conditions are such that the future requirements of the track layout cannot be foreseen with sufficient certainty to permit of fixing the location of a structure as permanent as a modern coaling station. There are cases, also, where a crane and bucket employed in other service can be used with economy to coal an occasional engine, but on the whole, the cost of coaling locomotives with a locomotive crane is higher than the cost of the same service as provided by a mechanical coaling station. The abandonment of a plant involving the use of a locomotive crane is also favored by the fact that the retirement of the crane imposes no financial problem since it is always possible to find uses for it in which, in most cases, it will be fruitful of greater economies than in locomotive coaling service.

The Modern Coaling Station

Thanks to developments carried out in the last few years, facilities for the delivery of coal and sand to locomotive tenders and for the disposal of cinders are now to be had in which all operations are conducted



Two Mechanical Cinder Plants

with a minimum of manual labor and of attendance. Combination facilities have been designed whereby one set of equipment performs a dual function, one track hopper and hoist, for example, being used to receive and hoist both wet sand and coal. Another illustration is afforded by the combined cinder plant and coal loader, the equipment serving in one capacity with the locomotive over the track hopper and an empty car under the spout and for the other purpose with a coal car over the hopper and the locomotive tender under the spout.

While the essential elements in all these types of service are the same, embracing a track hopper, suitable hoisting or conveying equipment, storage (except in cinder plants and direct coal loaders) and a delivery unit, each element is capable of adaptation to a wide variation in requirements. As a consequence, modern coal, sand, and cinder plants can be designed to meet almost any requirements as to capacity. In addition they can be accommodated to the most advantageous layout of an enginehouse approach or of main and passing tracks in a way that was entirely impossible with earlier types of equipment. They afford opportunities

for the completion of much needed changes in track layouts that cannot be carried out so long as the old service facilities are retained.

The economies to be realized by providing effective coal handling equipment have been demonstrated frequently by comparisons of the cost of coal service to locomotives before and after the new facilities are installed. However, it is difficult to present such cost analyses in a form that may not be subject to misinterpretation or unfair comparisons. Not all cost records are on the same basis. They are influenced by the

A Combination Counterbalanced Coaler and Cinder Hoist

amount of coal delivered, differences in wage rates paid for attendance and failure to make correct allocations of the wages of part-time employees. They are affected also by the sizes of the coal, the types of cars in which coal is received and whether or not breaker bars are provided over the hopper. Furthermore, cost data cannot demonstrate such advantages accruing from a modern plant as the availability of coal service on a greater number of tracks, the separation of coal into several sizes or grades, reduction in breakage and in the segregation of slack and lumps, greater convenience, and reduced detention of trains while coal is being taken.

Coaling Station Cost Data

However, based on studies of the performance of a large number of coaling stations, one manufacturer has arrived at the following average figures, which check very closely with similar figures obtained from other companies:

Where the quantity of coal handled is sufficient to keep assigned attendants busy, all coal is received in self-cleaning cars, no breaking of coal is required, and the operator does not issue coal to locomotives, the average cost of handling, including labor, power and supplies, is 3.5 cents per ton.

Where one-third of the coal must be shoveled from the car, the cost is 7 cents per ton.

Where all coal must be shoveled over the side of the car to a receiving hopper, the cost is 18 cents per ton.

Breaking coal through breaker bars adds from 1 to 25 cents per ton.

Interest and depreciation vary according to capacity and type of construction, from 2 to 6 cents per ton.

The cost of handling coal in a station of the inclined-trestle type under the same conditions averages from 18 to 24 cents per ton. The maintenance, interest and depreciation are considerably higher than on modern mechanical facilities. Coaling with clamshell bucket averages 20 cents per ton for labor, power and supplies. The maintenance of clamshell equipment averages about 6 cents per ton of coal handled.

At platform types of coaling stations where coal is shoveled into one-ton tubs and elevated onto the tender with an air hoist operated from the locomotive, the cost of operation averages 40 cents per ton.

Hand shoveling from a car direct to the tender involves an average cost of 50 cents per ton.

Modern full-automatic direct-type locomotive coalers with a high handling capacity will entail a cost for labor, power and supplies of 2¾ to 4 cents per ton. Interest and depreciation will average about 3 cents per ton of coal handled.

Examples of a few specific installations serve to bear out these average figures. For two 300-ton coaling plants the operating cost of delivering coal is now 4.3 cents to 5.93 cents per ton, compared with a cost of 10.2 cents to 12 cents for the old gravity chutes which they replaced. In view of the fact that the record for the new plants is being made at a time when traffic is at a minimum and the demand for coal is correspondingly low, it is obvious that the costs per ton will be further reduced when the demand for coal is increased. The same comment applies to an engine coaler that is now delivering coal at an operating cost of 9.6 cents per ton, compared to 27 cents for shoveling coal before it was installed. Records kept at one of the larger coaling stations through 1929, when the old facilities were being used, and through 1930 and the first six months of 1931, since a new plant was placed in service, give an average cost of 8.1 cents for the old equipment and 3.6 cents for the new plant in 1930 and 2.4 cents for the first half of 1931. This record covers the handling of from 9,100 to 12,414 tons per month.

Cinder Plants

Like the coaling station, the cinder plant offers a fertile field for economies. The disposal of cinders has been and still is a serious problem because the conditions imposed are such that no device can be expected to offer an ideal solution. Not only is the handling of cinders a disagreeable manual task, but the quenching of hot cinders produces a corrosive agency that is sure to make its effect apparent on any equipment supplied for mechanical disposal. However, the structural elements in the depressed-track type of cinder pit are also subject to rapid deterioration and with the high cost of shoveling cinders into cars in such pits, almost any type of plant that will eliminate hand shoveling offers marked savings.

Two general types of cinder disposal plants are now being built to replace the pits in which the cinders must be shoveled by hand—namely, the water pit and the mechanical cinder hoist. The first type embodies a pit over which tracks are carried on trestles, and from which the cinders are removed by a clamshell bucket operated by a locomotive crane or by an overhead traveling crane.

Where the services of the locomotive crane can be justified on other work when it is not being employed on the pit, or where the volume of cinders handled is sufficient to keep a traveling crane reasonably busy, the operating cost of such a pit represents a favorable saving compared with hand shoveling. Such pits also have the advantage of providing storage for the cinders so that a temporary breakdown of the cinder-removing equipment does not interfere with the dumping of ash pans. However, an important disadvantage at this time is the high first cost, the actual outlay depending on the size and the relative difficulty experienced in the making of the rather deep excavation

required. Another objection in northern latitudes is the trouble experienced with the freezing of the water-soaked cinders in the cars.

The other type of pit, of which several competitive proprietary makes are on the market, embraces a track hopper from which the cinders are discharged into a bucket that is hoisted to a sufficient height to permit them to be dumped into a car on an adjacent track, the cinders being quenched by a spray provided in the track hopper. Single-track installations may be installed in any number required to meet the demands of the terminal in accordance with almost any desired arrangement of tracks. However, a variation of this type of cinder plant has been applied in a number of cases in which a concrete tunnel or culvert is carried below track hoppers in two or more parallel tracks, to serve as a horizontal runway for a bucket from any one of the track hoppers to the point where the cinders are elevated for dumping. The cinder plants are usually operated by electric motors with push-button control so that labor for handling the cinders is entirely eliminated. According to the records of a manufacturer, the operating savings to be realized by installing a plant of this type are indicated in general by the following average figures.

The average cost of operation per locomotive, with a mechanical pit, where fires contain from 30 to 100 cu. ft. of cinders is as follows:

Fire knocking and cleaning up	35 cents per locomotive
Power and supplies	5 cents per locomotive
Maintenance of plant	6 cents per locomotive
Total cost	46 cents per locomotive

The average cost at hand-shoveled cinder plants is 85 cents per locomotive.

The savings effected by two specific installations costing about $10,000 and $8,800, respectively, are illustrated by the following data:

A three-track plant serving an average of 42 locomotives per day.

		Annual cost
Cost of handling cinders with the old facilities, 73½ cents per locomotive		$11,256
Cost with the new plant		
Interest and depreciation at 11 per cent	$1100	
Allowance for repairs	100	
Cost of operation (37.8 cents per engine)	5789	
Total (45½ cents per locomotive)		6,989
Saving per year (28 cents per locomotive)		$4,267

A single-track plant serving 14 locomotives per day.

		Annual cost
Cost of handling cinders with old facilities 5300 tons at $1.16 ($1.46 per locomotive)		$6,206.00
Cost in the new plant		
Interest and depreciation	$ 719.53	
Repairs	100.00	
Power	237.18	
Labor	1,564.20	
Supervision	391.52	
Total cost per year (71 cents per locomotive)		3,012.43
Saving per year		$3,193.57

Which is equal to 60 cents per ton or 75 cents per locomotive.

These statements not only demonstrate the economies to be realized by modernizing facilities but also illustrate the wide range in costs, due in part to differences in accounting and in part to the variations in service demands imposed.

A combination coaler and cinder plant, with separate pits and hoists that costs about $11,000, gave the following results for nine months service.

	Per Month	Per Ton
Coal handled	1111 tons	
Cinders handled	333 tons	
	1444 tons	
Labor Cost	$88.60	6.1 cents
Other operating costs	11.50	0.7 cents
Interest and depreciation at 11 per cent per annum	102.50	7.1 cents
Total cost	$202.60	13.9 cents

More favorable results were shown for another plant of the same type where the quantities handled were greater.

	Per Month	Per Ton
Coal handled	2,725 tons	
Cinders handled	350 tons	
	3,075 tons	
Labor cost	$117.70	3.8 cents
Other operating costs	23.75	0.8 cents
Interest and depreciation	102.50	3.3 cents
Total cost	$243.95	7.9 cents

These results are to be compared with an outlay of about 30 cents per ton with the equipment superseded by these facilities.

No article on coaling stations is complete without reference to sand facilities. It is now possible to embody in the plan for a coaling station sand handling facilities that are as fully mechanical as the equipment for handling coal, or introduce whatever degree of mechanical operation seems desirable. Owing to a failure to segregate the cost of handling sand from that for coal it is not practicable to give comparisons showing the economies of modern sand plants.

Not the least important of the advantages of modernizing line service facilities for locomotives is the opportunity afforded to provide an arrangement of the facilities, so that all or most of the service is provided at one spotting of the locomotive.

In Next Week's Issue

Systematization of railway office work, with the use of modern equipment scientifically chosen and installed holds forth the promise of large savings. One railroad has saved thousands of dollars a year simply by systematizing its correspondence using dictating machines which it already had. Another road is getting better reports from its employees, and reducing accounting errors, by stimulating the use of typewriters instead of longhand by its employees. Modern filing equipment is promoting efficiency in many railway offices. These and similar opportunities for promoting efficiency and economy in office work will be outlined in next week's article in the Operating Economy Series.

AN EXPERIMENTAL EXCURSION from points in Vermont to Montreal was operated by the Central Vermont on November 8. A feature of the rolling stock used was a restaurant car equipped with complete kitchen facilities and lunch counter running the length of the car. This restaurant car is fully equipped to serve lunches, sandwiches, coffee, etc., "at prices no higher than those charged by first class restaurants in any New England community."

Early Action on Wages Anticipated

Railroads expected to proceed under Railway Labor Act unless unionized forces accept cut voluntarily

EXECUTIVES of Eastern railroads, at a special meeting of the Eastern presidents' conference held in New York on November 24, decided to defer action on wage reductions until after the meeting of railway labor representatives, called for December 8 at Chicago by D. B. Robertson, president of the Brotherhood of Locomotive Firemen and Enginemen and chairman of the Railway Labor Executives' Association, for the purpose of reporting on the conferences which the latter held last week in New York with a committee of nine railroad presidents headed by Daniel Willard, president of the Baltimore & Ohio. Should no proposal for voluntary acceptance of a wage cut result from the labor meeting in Chicago early action on the part of the railroads, proceeding in accordance with the provisions of the Railway Labor Act, to effect a reduction in the wages of their unionized employees is expected to follow.

The special meeting of the Eastern presidents' conference was called to receive the report of Mr. Willard on the conferences with the labor leaders. J. J. Pelley, president of the New York, New Haven & Hartford, another Eastern member of Mr. Willard's committee, also discussed the conferences. The Western members of the Willard committee will report at a meeting of the Association of Western Railways, composed of executives of the lines in that territory, to be held in Chicago on November 30. L. F. Loree, president of the Delaware & Hudson and chairman of the Eastern presidents' conference, announced that another meeting of this group would be called as soon as the results of railway labor's Chicago meeting are known. Meanwhile, employees of the Georgia & Florida, including those in train service, have agreed to accept a cut of 10 per cent for a period of one year. The Georgia & Florida is in receivership.

That railway managements generally have become convinced that present conditions call for a downward adjustment of wages, is revealed in a letter written by Mr. Willard to Mr. Robertson.

"The railroads at the present time are confronted with a very serious situation", Mr. Willard said, "and as we explained to you earlier in the conference, the matter has received the serious consideration of railroad officers and they had concluded previous to the receipt of your letter of November 2 that conditions made it necessary for them to take steps to bring about a reduction in railroad wages. It was generally understood, however, that that action would be withheld until after the termination of this conference. This matter has been fully discussed during our conference and the reasons which in the minds of the railway executives have made such action imperative, have been fully set forth, and nothing has so far developed in our discussion, nor is anything suggested in your letter of November 21, which would seem to make unnecessary the course which the railway executives had decided upon before this conference was called."

Labor Requested Conference

The New York conferences were arranged at the request of the labor leaders when, as Mr. Robertson's letter to Mr. Willard reveals, "the question was quite generally raised throughout the country as to whether the railway employees would accept voluntarily a 10 per cent reduction in payrolls, and when it was urged that such action would increase employment." After preliminary conferences of the two groups separately the joint meetings opened on the afternoon of November 19 and continued daily, with intermittent breaks for separate meetings, until late on November 21. The meetings closed with the formal exchange of correspondence between Mr. Willard and Mr. Robertson. Mr. Willard, in a statement issued on November 21 dwelt upon the fact that "the conferences had been carried on in a fine spirit of friendship and that the discussions had been wholly devoid of any unpleasantness." Mr. Robertson in his letter said "You have listened courteously to our propositions and have discussed them to some extent....."

Three letters were involved in the exchange of correspondence, two written by Mr. Willard and one by Mr. Robertson. Mr. Willard's first letter, dated November 21, made no reference to a voluntary wage reduction but was concerned with a detailed reply to the program proposed by the labor representatives, as outlined briefly in the *Railway Age* of November 21, page 804. On the same day Mr. Robertson submitted his letter, a summary statement "in the interests of a clear understanding of the results of the conference." Mr. Willard's reply to the latter, dated November 22, concluded the interchange.

The railway committee will now report back to the railway executives in their respective regions while the labor leaders will call a meeting of general chairmen to convene in Chicago December 8 "for the purpose of submitting this entire matter to the consideration of these immediate representatives of the employees on the various railroad systems for their appropriate action in conformity with the laws of the respective organizations."

Robertson States Labor's Position

Referring to the labor program, described as "the product of long and earnest consideration of these problems" Mr. Robertson held that the representatives of labor received in the conferences "no encouragement that any action would be recommended or taken by railway managements to provide any substantial measure of relief of the present intolerable conditions."

Extracts from the remainder of Mr. Robertson's letter follow:

> In behalf of the interests which you represent (in a word to protect and to increase the present wages of capital) you have suggested that we recommend that all railway employees offer to take a voluntary reduction of 10 per cent in the payrolls based on present wage rates. This suggestion has not been coupled with any assurance that the money thus saved would be applied either to increase employment, or even to stabilize existing employment. We cannot regard seriously the argument that employment would be increased by such a wage cut, when those who make the argument decline positively to give any assurance that even men now employed will be continued in employment for any definite period.
>
> We have sought to obtain agreement on practical measures

that would stabilize existing employment and put as many additional men to work as possible. And although we recognize the obligations of railway managements to other interests, we submit that their obligations to the human beings dependent upon this industry ought to take precedence. If these obligations cannot be voluntarily given by you a first lien upon operating revenues, at least you cannot reasonably expect the railway employees voluntarily to place the claims of human life secondary to the claims of property.

More than one-third of the employees of this industry are idle and more than one-third of the capital in this industry is idle. You are taking nothing from the earnings of capital to support unemployed workers. You are asking that the employed workers take ten per cent from their earnings to support idle capital. We submit that the first duty of the employed workers, after their duty to their dependents, is an obligation to their fellow employees who are denied an opportunity of employment.

The railway employees have been called upon to share their earnings with their fellow employees for two years and they have responded to that call. Several hundred thousand men have reduced their hours of work and their earnings voluntarily to give employment to others. All railway employees have contributed generously to the relief of their fellow workers in distress. If they were called upon to budget all their contributions and to contribute 10 per cent of their earnings to the relief of 500,000 unemployed railway workers, such a proposal would seriously appeal to them.

Therefore, when the question was quite generally raised throughout the country as to whether the railway employees would accept voluntarily a ten per cent reduction in payrolls, and when it was urged that such an action would increase employment, their representatives sought this conference for the primary purpose of determining whether any program could be adopted which would give assurance of stabilizing and increasing employment, to relieve in part the widespread distress of railway employees. We have been informed that no such assurances can be given. We have been asked to contribute, not to the relief of our fellow employees, but to the relief of those who have no claim upon our charity. We submit that impartial public opinion will support our answer that *labor cannot be called upon to pay a dole to idle capital.* We are confident that this proposition can be submitted to any well-informed, impartial judgment without fear of the consequence.

The argument has been widely made that the wages of railway labor should be reduced because it is claimed that the wages of labor in other industries have been reduced. Regardless of the justice or wisdom of such reductions, we submit that the comparison is utterly unsound. The prices of the products of nearly all other industries have been reduced. It has been argued that since the labor of each employee was producing less money he should accept less compensation. Regardless of the soundness of this argument, it cannot be applied to the railroad industry. For many years the labor of each employee has produced more revenue than the year before. Since the present depression began the prices of the transportation service, which is the product of this labor, have not been reduced. In fact, authority has recently been granted to increase the rates of transportation service in amounts estimated to produce $125,000,000, more revenue from the same amount of labor. Whether this increase, which can be accepted by the managers of the railroads, will be accepted on the conditions proposed, rests within their decision. But, regardless of their action, it cannot be denied that the labor of each railroad employee in the future will produce as much revenue for the employer as in the past and probably more revenue.

Therefore, the suggestion of a wage reduction means simply that the labor share out of every dollar of revenue shall be decreased in order that the capital share may be increased. We submit that justice and a decent regard for the value of human life demand that, in this time when millions of men and millions of dollars are unemployed, every dollar deducted from the earnings of employed men should be used to provide employment, or to support those workers who are denied the opportunity to earn a living. No other principle of a distribution of the rewards of industry should be voluntarily accepted by the workers, and we do not believe that any other principle will be imposed by the power of government, or the force of public opinion.

The resolution creating the railway committee directed that body to call Mr. Robertson's attention to the following facts:

"That the numerous railroad labor organizations comprising the membership of the Railway Labor Executives' Association only four of them—namely those of the Engineers, Firemen, Conductors and Trainmen—represent their respective classes of employees on substantially all the Class I railroads in the country and have agreements with said railroads covering wages and working conditions; that, accordingly a considerable number of the organizations comprising said Association do not represent their respective classes of employees upon, nor have contracts with, many of the Class I railroads."

Railroads Suggested Voluntary Cut

While the foregoing resolution further stated that the committee created thereunder "is not authorized to enter into any negotiations touching the matters discussed," Mr. Willard's second letter to Mr. Robertson indicates that the voluntary 10 per cent reduction proposal originated with the railroad committee. This Willard letter speaks of Mr. Robertson's reference "to the suggestion which we ventured to make that in view of the present condition of business, the railroad employees consider the wisdom of voluntarily accepting a general reduction of their wages equal to 10 per cent for a limited period of one year, such agreement to terminate automatically at the expiration of 12 months unless continued by agreement for a longer period."

This letter continues in part as follows:

We were moved to make this suggestion having in mind not only the very wide-spread and serious business depression, with the resultant decreased railroad earnings, with which you are all familiar, but also the further fact that the reduction in cost of living since many, if not all, of the present rates have been in existence, has been so great, as shown by the official reports of the Labor Department in Washington, that with a 10 per cent reduction in the day's pay of the individual he would nevertheless be able to purchase substantially more of the things that enter into the cost of living than could have been purchased on the basis of the present wages at the time when they became effective. We will not enlarge further upon this matter at this time because the whole subject as you know was very fully discussed during our conference.

You refer in your letter to the fact that our suggestion concerning a voluntary wage reduction was "not coupled with any assurance that the money thus saved would be applied either to increasing employment or even to stabilize existing employment." This matter, you will recall, was also very fully discussed in conference and we gained the impression that you realized the difficulties, in fact the impossibilities, of giving any assurances concerning the future with conditions as uncertain as they are at the present time. We did, however, express the view that should such a reduction be made as we suggested, it would naturally tend to stabilize the employment of those now in the service and probably result in bringing back into the service many now temporarily unemployed. We also pointed out that in case a reduction should not be made and business continue on the present basis, it would probably come about that some of the men now working would have to be furloughed.

In view of what is said in your letter concerning the earnings of capital, we think we should call attention to the fact that without capital there could be no railroad industry at all. A capital investment of approximately $15,000 is necessary for each man employed in the railroad industry, and railroad men with their well-known habits of industry and thrift would, we are sure, be the last to advocate any policy that would result in those who have invested their capital in the industry being deprived of a fair return thereon. That they are not now receiving as a whole the fair return to which it would seem they should be justly entitled, is too well understood by yourself and your associates to require further elaboration by us. Those who constitute the committee of nine with which you have been dealing have spent their entire business lives in the railroad service and we would not like to have it thought that we are in any sense indifferent concerning the welfare of those men or any part of them with whom our entire active life has been spent.

Railroad Reply to Labor Program

The program proposed by the labor leaders was discussed during the first two days of the New York conference according to Mr. Willard's other letter, the purpose of which was to put in more definite form "the substance of what was said by the representatives of the railroads concerning your several suggestions."

This letter which considered one by one the proposals submitted in the second part of the labor program under the heading "Immediate Measures" reads in part as follows:

Under the caption "Immediate measures" you propose the following:

1. "Stabilize employment by assuring one year of employment to the necessary employees in every class—

"(a) This stabilization should include provisions for putting to work as many men as possible consistent with maintaining satisfactory conditions in the respective classes of employment."

"(b)—The necessary stand-by forces should also be assured of a minimum amount of part time employment."

The members of our committee are sympathetic with your desire that whatever may be practicable should be done for the purpose of removing so far as possible the feeling of uncertainty concerning the future which no doubt may exist at the present time in the minds of many who are now employed either upon a whole-time or part-time basis. We are quite willing to recommend to those whom we represent that this matter be given careful and sympathetic consideration with the view of stabilizing employment. We do not feel, however, that we would be justified in encouraging the thought that the so-called necessary stand-by forces can be or should be assured of a minimum amount of work each month. You, of course, realize that we cannot offer employment, certainly not in times like the present, beyond our necessary requirements.

2. "Since the six-hour day is necessary and must be instituted to absorb the existing number of experienced employees without reduction of compensation, a commission should be created to determine the ways and means of applying this principle to the different classes of employees,—"

This subject, as you will recall, was quite fully discussed during our conference and I need not repeat what was said at that time. For reasons which we have fully stated in conference and with which you are familiar, we have found ourselves unable to accept your conclusion that the six hour day is necessary and that it must be instituted in order to absorb the existing number of experienced employees without reduction of compensation. Consequently we would be unwilling to recommend the appointment of a commission to determine the ways and means of applying this principle to the different classes of employees.

3. "Joint action should be undertaken between management and employees to promote—

"(a)—One billion dollar United States bond issue for grade crossing elimination on main traveled highways. One-half cost to be borne by government as improvement of interstate highways. One-half cost to be borne by railroads to be repaid by payment of interest and sinking fund payment to retire bonds in 50 years."

We doubt the wisdom of recommending to the federal Congress the appropriation of one billion dollars for the purpose set forth in your program. We realize, however, that there is much disparity of practice concerning this matter and the manner in which it is dealt with in the several states, and we think it is quite possible that the railroads could cooperate with you and your associates towards bringing about an improvement over the present situation. We would be in favor of a full and careful study of the subject and we believe that a common basis might be developed upon which we could jointly seek to obtain action beneficial to all concerned. The railroads have an established law committee under the chairmanship of Colonel Alfred P. Thom, with headquarters in Washington, and we would suggest that you confer with Colonel Thom concerning this matter and he will, we are sure, be glad to arrange with you for a joint conference for the purpose of giving this subject further consideration. We will advise Colonel Thom that he may hear from you.

"(b)—Regulation of motor transportation and freight forwarding companies; including provision for employment of furloughed railroad employees."

There seem to be three distinct and separate thoughts involved in this particular suggestion. We believe our views are in accord with yours concerning the fair and proper regulation of motors engaged in highway transportation. We do not think any unfair or unjust burden should be placed upon transportation agencies of any character. At the same time it is believed that the motor transportation now enjoys certain advantages which in effect are prejudicial to the railroads. The Interstate Commerce Commission has been conducting an investigation concerning this matter and we understand it has in mind proposing to Congress legislation deemed necessary in this connection. The railroads through their legal committee of which Alfred P. Thom is chairman, have outlined, in a memorandum, essential features to be protected and covered in legislation, a copy of which we will furnish you. We feel that much may be accomplished in national and state legislation, and appreciate the opportunity of working with you to this end.

As to freight forwarding companies, this matter is also as we understand, under investigation by the Interstate Commerce Commission, and we question the wisdom of our attempting to reach any conclusion in that connection at this time based, as it would be, upon insufficient knowledge of the situation. We do not think that the interests of the railroads and its employees concerning this matter are or should be at variance.

Concerning provision for employment of furloughed railroad employees which you refer to, we understand that it is your desire that furloughed railroad employees be given opportunity for employment by motor companies and forwarding agencies when controlled by railroads. We think this request has merit and we will be pleased to recommend to the railroad executives concerned that consistent with the requirements of the service preference be given to furloughed railroad employees when additional men are required.

"(c)—Protection of all interests in railroad consolidation."

You will recall that this matter was very fully discussed at our conference but owing to the conflicting viewpoints concerning certain phases of the subject as presented by you, and having in mind also that the subject is one concerning which railway executives are not in complete accord, we think it would be difficult if not impossible for us to reach any joint conclusion concerning the matter at this time.

"(d)—Federal legislation to provide retirement insurance and elective workmen's compensation."

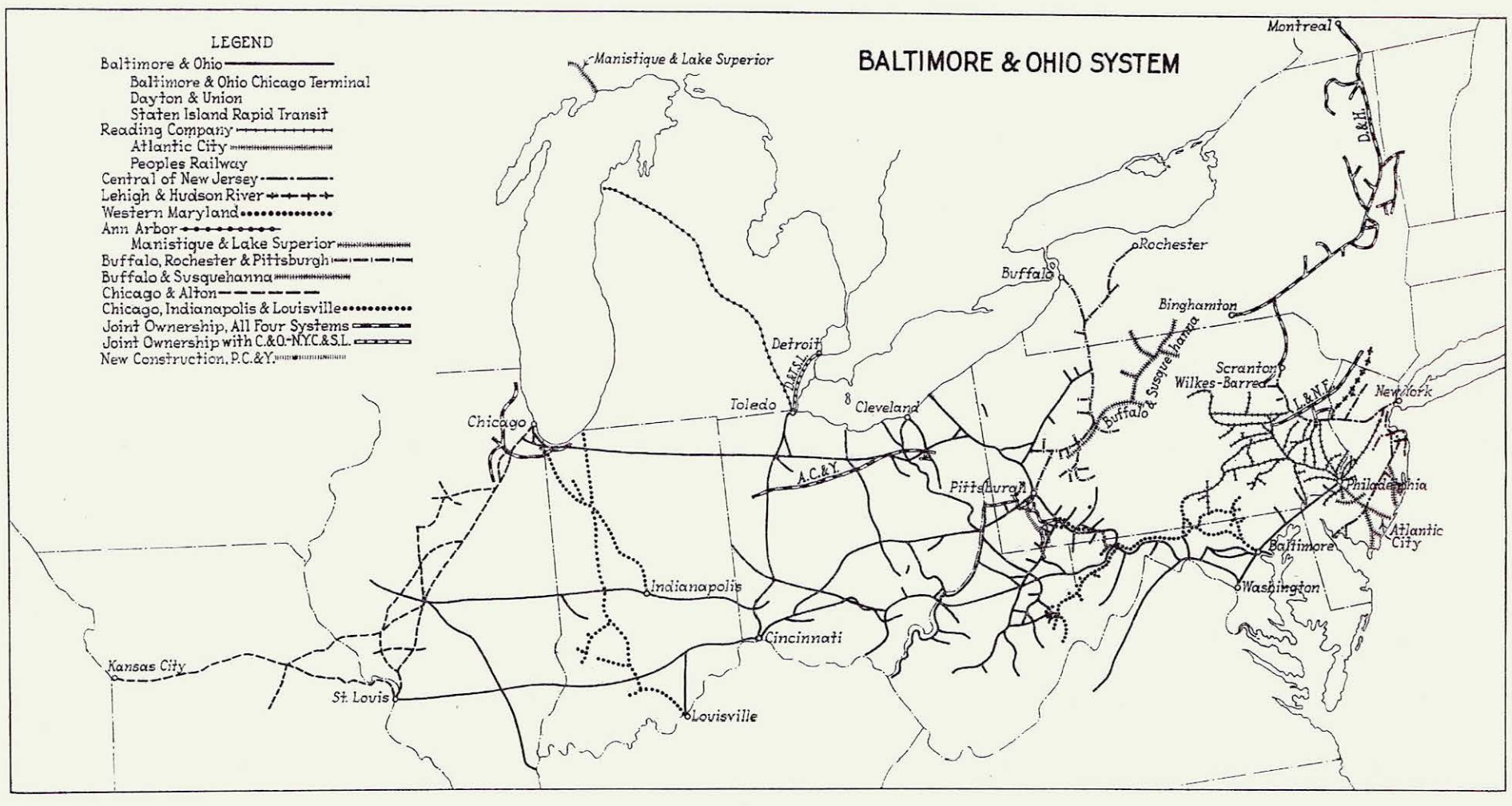
This matter was also discussed exhaustively during our conference and we think we now have a correct understanding of the viewpoint of yourself and your associates in this connection. So far as we know, this subject is one which has not been discussed by the railroad executives in general conference, and we doubt if any generally accepted view is held by executives concerning this matter. We will be glad to report back to the railroads the substance of our discussion, together with a statement of your views as we understand them. In the meantime it is our understanding that this matter has been the subject of brief discussion between some of the members of your Association and a small group of railroad executives in the East, and that arrangements have been made for a joint committee to study the subjects and report to the executives who name the representatives to confer with your committee. This committee hesitates to express itself as to the desirability of legislation on these subjects.

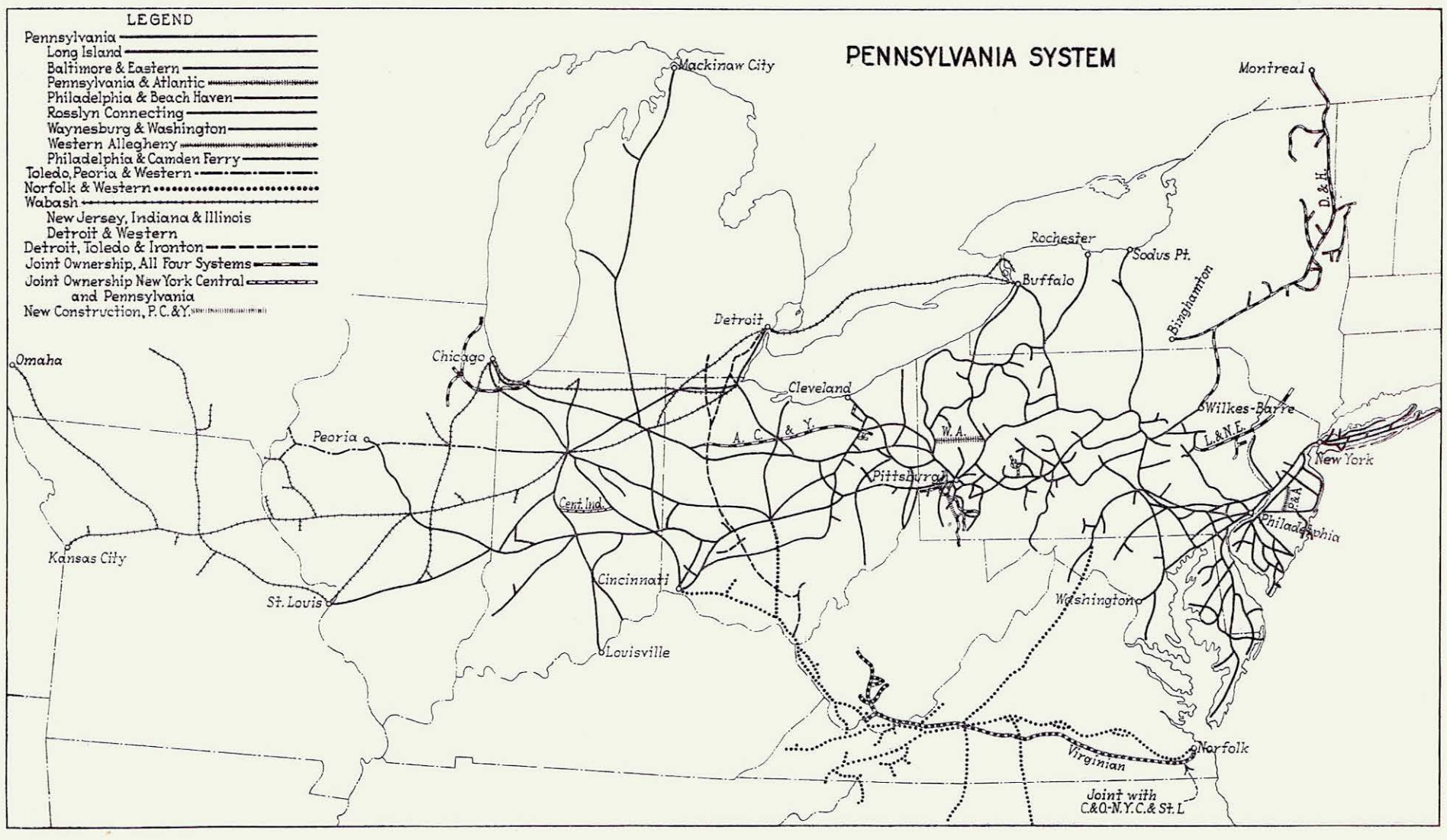
"(e)—Establishment of an emergency employment bureau to prepare the way for the eventual establishment of a national placement bureau and to provide means for placing unemployed rail workers as additional opportunities of employment may develop."

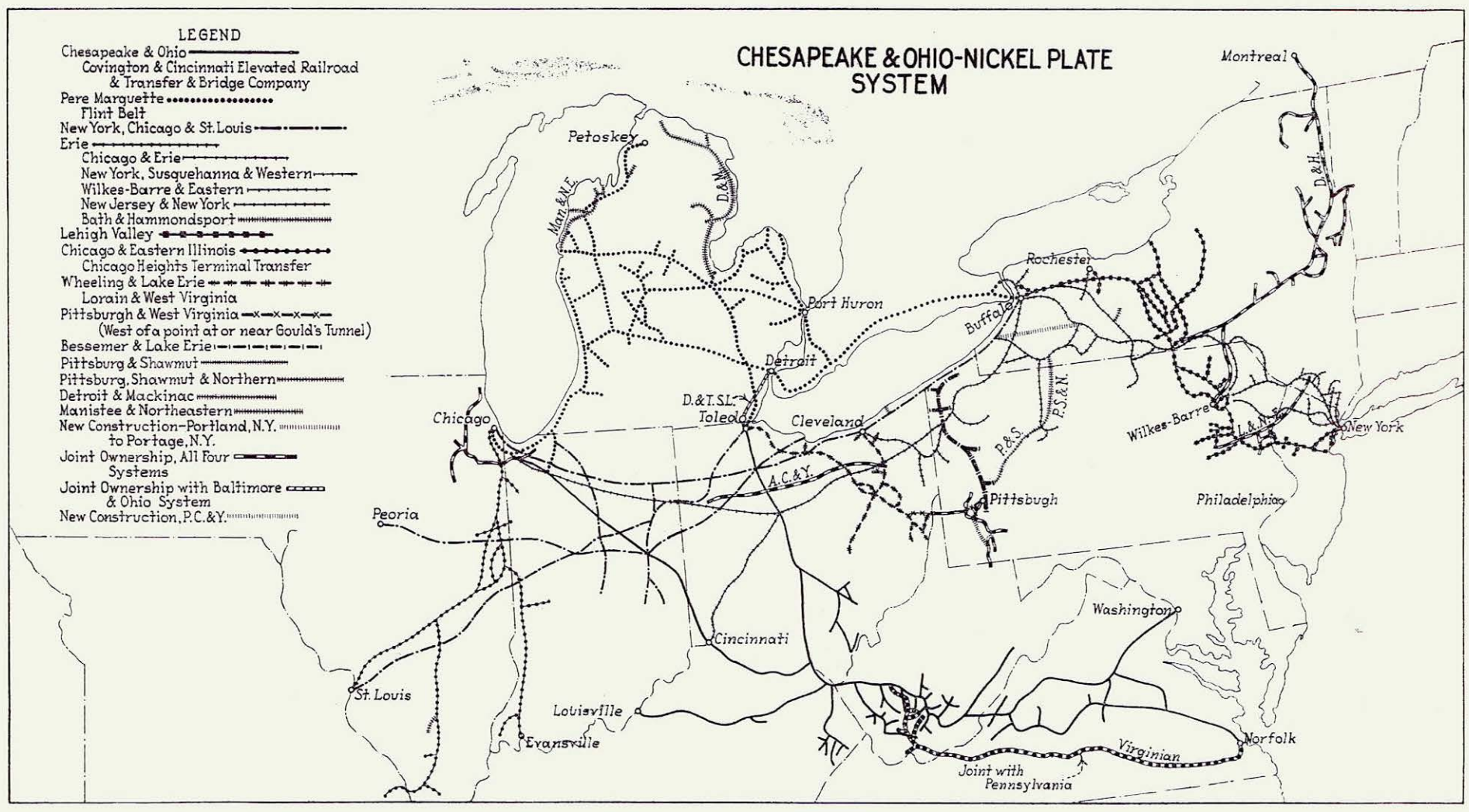
It is clear, of course, that the purpose of the above recommendation is to provide agencies where necessary to assist in finding work for men with railroad experience who for one reason or another may happen to be out of employment. We are not unsympathetic with your thought in this connection. We can see, however, that an arrangement of this kind might, if not carefully worked out, tend to close the avenues of advancement for men already in the service, and we do not understand that it is your wish to create such a situation. We are quite willing to recommend to the railroad executives that your request be given careful study and that an effort be

Maps of Proposed Eastern Trunk Line Systems

HEARINGS on the proposed consolidation of the eastern trunk lines into four systems begin in little more than a month. The *Railway Age* is, therefore, publishing herewith an insert containing a map of each of the four proposed systems for the convenience of its readers in following these proceedings, and to show conveniently for reference purposes the salient details of this far-reaching plan. A limited number of additional copies of these maps have been printed and, as a service to *Railway Age* readers, will be available to them at a price of 15 cents a single copy, with an appropriate reduction for quantity orders. Inquiries should be addressed to the New York office, 30 Church street.







LINES TO BE OWNED JOINTLY BY ALL FOUR SYSTEMS

Delaware & Hudson
Cooperstown & Charlotte Valley
Greenwich & Johnsonville
Schoharie Valley
Napierville Junction
Lehigh & New England
Montour
Pittsburgh, Chartiers & Youghiogheny—Trackage over the Penna., Woodville Jct., Pa., to Van Emman, to reach new construction of P. C. & Y. and Monongahela Railway, Van Emman to Clarksville, Pa.
Monongahela
Pittsburgh & West Virginia (East of a point at or near Gould's Tunnel)
Elgin, Joliet & Eastern
Akron & Barberton Belt and Akron, Canton & Youngstown

RAILWAY AGE

Supplement to the Issue of November 28, 1931

FOUR SYSTEM PLAN FOR THE EASTERN RAILWAYS

Submitted to the Interstate Commerce Commission on October 3, 1931, with an application for a modification of the commission's consolidation plan of December 9, 1929, by Daniel Willard, president of the Baltimore & Ohio; J. J. Bernet, president of the Chesapeake & Ohio; P. E. Crowley, president of the New York Central, and W. W. Atterbury, president of the Pennsylvania.

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made to meet your views so far as it can be done without injury to others.

"(f)—Coordination of train crews and train lengths on the basis of economical, safe operation—including any desirable state or federal legislation.

This matter was also fully discussed during our conference. With you we believe that train lengths and train crews should be coordinated on the basis of economical and safe operation, but unfortunately it has not been easy to agree as to what is safe and what is economical operation. The two terms are relative rather than absolute. It was our conclusion, as expressed in the conference, that probably we would be unable to agree concerning this matter and consequently we doubt the wisdom of recommending to the railroad executives at this time joint effort in this connection as you suggest. The question is one which we think can best be dealt with by the employees and managers of the individual companies.

4. Inasmuch as this particular paragraph involves two distinct recommendations, we have for convenience sub-divided the paragraph into sections (a) and (b).

(a)—"In order to carry forward the foregoing program, a continuing cooperation between railroad managements and railroad employees is essential."

We are in hearty accord with a policy of cooperation between the railroad companies and their employees, and we shall recommend to the railroad executives that such a policy be encouraged to the greatest possible extent.

(b)—"This will require complete willingness and good faith of railroad managements in dealing with the self-chosen representatives of railroad labor, and whole-hearted compliance with the spirit and the letter of the Railway Labor Act."

This subject was quite fully discussed in our conference but as we explained at that time it raised questions which our committee was not authorized to deal with and consequently we do not feel in position to make any definite recommendation in that connection to the group or groups of railroad executives by whom we were appointed.

The Problems of Railway Labor

The first section of the labor manifesto, including in addition to references to the foregoing, other general proposals to be worked out in the future, reads as follows:

The problem which railway labor must solve:

A. *Insecure Employment.*—Seasonal character of traffic has always made employment insecure—and relief for older employees through seniority rules has been sought. But technological changes, reducing total volume of employment, have limited seniority protection to fewer and fewer employees. The solution of this problem lies in stabilizing employment along two lines:

1. Where work can be budgeted for the year and spread evenly, an average force should be assured employment for one year and at least part time employment should be assured to the stand-by force necessary for heavy traffic periods. The maintenance of equipment and maintenance of way work are examples of work which can be budgeted to a large extent. Running repairs and inspection service, dependent on volume of traffic, may require treatment similar to transportation service.

2. Where the fluctuating and uncertain volume of traffic calls for expansion and contraction of forces somewhat irregularly, it should be possible to establish minimum forces assured of full employment for one year and the necessary stand-by forces assured of a certain amount of part time employment in one year.

The workers who are normally required for the operation of a railroad must have as much assurance of a fixed compensation from their fixed investments in the enterprise as those who invest money for a fixed return. In fact the essential labor charge should be a first lien upon the revenues of any business. The insecure income of the worker-buyer is a greater menace to the good order and progress of society than the insecure income of the investor-seller.

The amount of seasonal employment on the railroads is not indicated in the averages of all railroads. Heavy movements of grain from the west, of fruits and vegetables from the south, and from the west, of coal from the east and from the south; and movements of cotton, lumber, oil, manufactured goods, etc., from different parts of the country, occur in different months. Therefore, the total number of employees required by the industry is greater than the annual average number reported by the Interstate Commerce Commission and the fluctuations in employment on individual roads are far greater than indicated in the monthly averages reported.

If employment could be stabilized by a common program throughout the industry, the excessive number of men now furloughed by each road, who earn annually far less than even a living wage, could be materially reduced. Then it might be possible to create a mobile force of extra workers, shifting from one road to another somewhat as Pullman cars and freight cars are shifted to meet traffic requirements. Nothing less than a coordinated effort of all employers and employees could accomplish such an assurance of practically full time employment for all experienced employees. But this achievement without an increase in rates of pay would raise considerably the actual average earnings of the employees; and would increase substantially the efficiency of labor, while decreasing the labor cost of all railroads, by reducing the turnover and improving the quality and morale of the employees.

There should be established a national placement bureau for the purpose of relocating railway employees separated from the service of a railroad because of permanent reductions of force and to provide for the temporary transfer of employees to extra work produced by seasonal or other temporary increases of traffic.

In order thus to stabilize employment without a vast amount of individual hardship it will be necessary to deal with the problem of diminishing employment so as to absorb between 200,000 and 300,000 unemployed men now dependent on the industry, but without reasonable expectation of reemployment even in a revival of past traffic volume.

B. *Diminishing Employment.*—Technological changes, including the use of larger equipment and the constant substitution of machine power for man power, have eliminated jobs more rapidly than they could be recreated by increased traffic. It is reasonable to assume that further diminutions will result from future similar developments, and from the transfer of a part of rail transportation service to the motor transportation agencies.

In order to prevent unfair competition, motor transportation should be required to observe the same principles of safe, efficient and socially just operation that have governed rail transportation. The rail managements and investors are particularly interested in a fair competition with money invested in the railroads. The rail workers are particularly interested in a fair competition with labor invested in the railroads. Similar working conditions should prevail; and there is no reason why rail workers displaced by motor transportation agencies should not be relocated in furnishing motor transportation services similar to those they are trained to perform on the railroads. The operating services, the maintenance and clerical services call for much the same general training in both fields.

The principal method of dealing with diminishing employment which should be adopted is shortening the hours of labor. The social advantage of this program is clear. Instead of adding employees to the ranks of the unemployed, an industry in which the productivity per employee is greatly increased can be called upon to shorten hours of work without reduction of annual earnings per employee.

Comparing 1910 and 1930, the employee of today handles over 50 per cent more traffic and produces twice as much surplus revenue over labor cost.

The establishment of the eight-hour day has demonstrated that improved methods and machinery and the increased efficiency of the workers permit of a shortened work day without reduction of average earnings and without a corresponding increase in the total payroll.

It should, however, be recognized as more socially desirable to pay wages to workers than to pay returns on property. Unless costs of production can be materially reduced and displaced workers can be relocated, there is no social advance in the substitution of machine power for man power. Every industry should aim to reduce man power only by employing less new men and shortening work hours and not by discharging experienced workers. After such humane reductions of man power are accomplished an industry requiring less man hours should reflect this increased productivity in higher wages for the reduced forces.

C. *Inadequate Wages.*—A principal cause of inadequate wages in the railroad industry is part time employment. A wholly false picture is presented by the wage statistics reported to the Interstate Commerce Commission. Thousands of train and engine service employees work only from four to eight months a year. Thousands of maintenance men (in the shops and on the right of way) are idle for a substantial part of the year. In the months of employment their wages may average about as reported but average earnings on the basis of $1,500 per year for only eight months of work equal only $1,000 per year.

The average number of hourly workers in 1929 was less than 1,600,000 but it is fair to estimate that at least 1,900,000 employees collected the $2,601,715,716 paid in wages. Thus the average compensation instead of $1,623 would be only $1,369. The stabilization of employment heretofore suggested would go far toward leveling up the present earnings of those now earning less than even a living wage.

Present provisions to protect against temporary or permanent disability are largely either voluntary deductions from

(Continued on page 828)

Traffic League Attacks Policy of Railway Executives

Members at annual meeting vote to oppose any truck and waterway legislation carriers may try to secure

A SET of principles, expressing an attitude of opposition toward the policy of the railway executives and a motion to oppose any truck and highway legislation which the carriers may try to secure, were adopted by the National Industrial Traffic League at its annual meeting at Chicago on November 18-20. The principles adopted refer to the regulation of motor trucks, compensation for the use of highways and regulation of water transportation, while recommendations by the league's Highway Transportation committee dealt with taxation, certificates of public convenience and necessity, the use of highways by railroads and the co-ordination of rail and highway transportation. A report was also made on the plan of the Association of Railway Executives, filed with the Interstate Commerce Commission on November 19, providing for the creation of the Railroad Credit Corporation to administer the pooled fund to be derived from rate increases as suggested by the commission in its decision in the 15 per cent rate increase case.

The following officers were elected for the ensuing year: President, Herman Mueller, traffic director of the St. Paul Association of Commerce, St. Paul, Minn.; vice-president, Fred M. Renshaw, traffic commissioner of the Buffalo Chamber of Commerce, Buffalo, N. Y.; and treasurer, Roy W. Campbell, manager of the transportation department of the Butler Paper Corporation, Chicago, re-elected.

Statement of Principles

The principles which were adopted by the league, as indorsed by the special committee of the executive committee appointed to exchange views with the railroad executives on the railroad declaration of policy, are as follows:

1. The public is entitled to the benefit of the most economical and efficient means of transportation of commerce by any instrumentalities of transportation which may be suited to such purpose.
2. No legislation should be attempted which has for its purpose the stifling of any legitimate form of transportation.
3. To the extent that any governmental regulation of the rates and charges of any form of transportation is undertaken, the determination of maximum reasonable rates and charges should be based upon the operating conditions in that particular field of transportation, together with other pertinent conditions, and should not be determined by mere relation to the rates and charges of competing agencies of transportation, but this should not be construed as prohibiting permissive authority to meet the rates of competing agencies under proper conditions.
4. Efficient railroad transportation is essential to the commerce and welfare of the country as a whole, but this declaration does not mean that efficient highway and water transportation is not also essential to modern commerce.
5. Any permanent policy of governmental operation of transportation agencies is contrary to the public interest.
6. Reasonable compensation should be paid for the use of public highways by commercial motor vehicles.

This set of principles was amplified by action upon several phases involved in the issue. The league approved that portion of the report dealing with the regulation of motor trucks, wherein the committee thought the league should favor the development of uniform codes among the several states to govern the operation of motor carriers upon the public highways, and wherein it believes that railroads should be permitted to operate lines of motor trucks for hire but that no such operation should be carried into the accounts of railroad operation proper. The committee was of the opinion that transportation has not yet reached the stage where the rates and charges of interstate motor truck operators should be regulated by law. Neither did it believe that certificates of public convenience and necessity should be required before a person is permitted to transport freight by motor trucks for hire, either as a contract or common carrier.

The report stated that it is impracticable and unwise at this time to require motor truck operators to give schedules and regular service to the public, and that many problems have arisen as a result of the development of this new form of transportation. Insofar as it is practicable, the report continued, it would be proper to provide for the protection of the public against irresponsible motor truck common carriers, holding themselves out to transport commerce for hire. In favoring the use of highways by railroads, the committee looked with disfavor upon any law which would permit the railroads to pass the burden of unprofitable motor truck operation to the public by including such losses in the expense of railroad operation.

In that portion of the report dealing with compensation for the use of highways, the committee expressed the view that this is primarily a problem of the states and recommended that any federal legislation on the subject be opposed, unless it be necessary to enable the states to handle the problem themselves, or unless it be found that there is no hope for its solution through action by the respective states. The committee was of the opinion that commercial motor vehicles should pay their proper share of highway expense and that in determining their share consideration should be given to the greater use they make of the highways. Because of the lack of knowledge relative to the wear and tear upon the highways of the respective classes of vehicles, or as to the proportionate amount of compensation which should properly be exacted from the several classes of motor vehicles, the taxes and fees exacted by various states vary to an extreme degree and, the report continued, in most cases, have not been fixed with a view to determining the proper compensation to be exacted nor the proper expense to be met. Necessarily, conditions vary in different sections of the country and such fees need not be uniform, but there should be a uni-

form policy adopted with some provisions for reciprocity between the states so that each state may have opportunity to be compensated fairly for the use made of its highways by commercial vehicles registered in other states.

In adopting the committee's report, the league took the position that it is proper for the commission to be required to grant authority to depart from the Fourth section to meet motor truck competition, provided it found, after due investigation, that the rates to be authorized were compensatory and would not constitute a burden upon other traffic, that they would not result in the destruction of a competitive agency of transportation, and will not depart from the aggregate-of-intermediate-rates provision of the Fourth section. This attitude was based upon the fact that for several years the League has felt that the provisions of the Fourth section were too rigid to enable the carriers to meet competition in cases where the meeting of such competition would not place undue burden upon other transportation. The developments of the past few years have accentuated that conclusion, and the committee believed that active efforts should be made by the League to bring about such modification as will permit the railroads to meet this situation.

Regulation of Water Transportation

The committee was opposed to any attempt to regulate water rates or service, or to require publication of tariffs in the case of private lines or chartered boats where the service is private carriage for the charterer and was of the opinion that jurisdiction over port-to-port rates and the regulation of such service by regular or irregular carriers should not be placed under the Interstate Commerce Commission. Neither did the committee feel that certificates of public convenience and necessity should be required of steamship lines. The committee contended that the conditions which affect water transportation differ so widely from those affecting rail transportation that it is difficult to make a comparison. Uniformity of rates and classifications and adherence thereto, by competing lines of water carriers is impracticable, and strict uniformity would be unfair to some of the water carriers as well as to shippers. Steamships are at liberty to go wherever cargo is offered and lines are at liberty to vary their service in accordance with the tonnage offering. In some cases it is practicable for lines to operate regular service the year round, while in many other cases it is not practicable. Vessels in irregular service should be permitted to compete with vessels in regular service. For these and other reasons, it is not considered in the public interest that a vessel carrying a cargo for hire should be required to obtain a certificate of public convenience and necessity before it is permitted to operate, or to conform to standardized requirements for scheduled service.

Exception to this report of the special committee was taken by Murray N. Billings, traffic manager of the Illinois Steel Company, who contended that the so-called statement of principles in the report clearly indicates that the ideas expressed are based on very meager information, that there is a great difference of opinion as to what are legitimate forms of transportation and what are not, and that the league should refrain from expressing itself until complete information is available, and if this cannot be done, it would be better for the league to oppose all legislation regarding trucks and waterways because of the lack of information. W. H. Chandler, manager of the traffic bureau of the Merchants Association of New York, questioned the sincerity of the railway committee co-operating with the league on the policy of the railway executives and proposed that the league sever relations with the railway committee and oppose legislation which he charged the railways were endeavoring to secure without first co-operating with the league. His motion, which the league adopted, instructed the committee to inform the railroads that the league had taken a definite position and would oppose any legislation which the carriers might endeavor to secure.

Restrictive Legislation Against Motor Trucks Opposed

While the report of the special committee dealing with the policy of the railroad executives touched upon motor truck operation, the report of the Highway Transportation Committee covered the subject in more detail. This latter report, which was adopted by the league, contended that the arguments that improved highways are constructed primarily for the use of pleasure vehicles, is an obvious fallacy. From the beginning, it continued, highways have been built and maintained quite as much for the transportation of goods, including commercial freight, as for passenger travel. The public is entitled to the full benefit of lower freight transportation costs on improved highways, whether the freight be transported in owner-operated vehicles or by commercial carriers. Excessive taxation of motor freight carriers, whether private or commercial, is a tax upon transportation which must finally be borne by the public. Therefore, it is clearly in the public interest not to discourage or penalize transportation on the highways by excessive tax burdens. Neither should discriminatory taxes be exacted from commercial carriers on the highways. Such taxes would be a penalty on the users of transportation and would be an undue discrimination against such users and unjust preference of commerce in not-for-hire vehicles. It was the view of the committee that motor truck taxes should not be greater than an amount sufficient to pay their fair share of the cost and maintenance of improved highways, that present taxes are on the whole sufficiently high for that purpose, that motor vehicles taxation should be applied alike upon private and commercial vehicles of the same class and that no penalty taxation should be exacted upon commercial carriers and no discrimination made in the taxation of common and contract carriers as distinguished from privately-operated vehicles.

The committee believed that the requirement of certificates of convenience and necessity as a condition precedent to operation of either common carriers or contract carriers of freight on the highways is contrary to the public interest, contending that the flexibility of motor transportation is one of its greatest advantages to the public, and that it would be largely destroyed by such restrictions, that competition between carriers, which, it said, increases the efficiency of transportation and reduces the cost to the public, would be curtailed or eliminated, that expense of operating carriers on the highways would be increased and that the public would have to pay the bill. It charged that railroad proposals for such certificates are founded upon self-interest in the hope that the consequent curtailment of highway transportation would force a greater movement of traffic over the rails.

The committee believed that legislation designed to enforce rate regulation upon highway freight carriers was ill-advised and contrary to public interest. The report stated that the arguments favoring rate regulation of highway carriers are generally to the effect that public interest will be served by eliminating cut-throat competition between the highway carriers and discrim-

ination and charges paid by one shipper as compared with another. It is significant, the report said, that these arguments come mainly from railroads—not from the shippers. Very few highway freight carriers advocate rate regulation. All of them insist that if such regulation is attempted, it should be enforced against contract haulers as well as common carriers on the highways. The impracticability of requiring contract haulers to publish rate schedules is, however, manifest and no practical suggestions have been made as to how it can be done.

Joint Rail and Highway Rates and Routes

The committee believed that joint rail and highway rates and routes would be in the public interest and recommended that the league's legislative committee be instructed to advocate whatever change in federal legislation may be necessary to permit railroads to establish them. This committee also was of the opinion that the league should go on record as advocating a liberal attitude by the Interstate Commerce Commission and other regulating authorities toward all experiments in the new field of co-ordinated rail-truck transportation to encourage its maximum development in the public interest with a minimum of restriction by regulatory rules. It commended the awakened attitude of railroads throughout the country in dealing with these problems. The committee believed that legislative developments pertaining to motor carriers during the year have sustained and justified the league's policy of opposing rate regulation or other restrictive legislation regarding motor truck transportation, except in the interest of safety and responsibility, and recommended that this policy be continued and that the league's officers and Legislative and Highway Transportation committees be authorized to oppose, actively, any bills contrary thereto that may be introduced in Congress during the next season.

Railroad's Modification of Pooling Plan Criticised

The modification of the suggested pooling plan of the Interstate Commerce Commission filed with that body by the Association of Railway Executives on November 19, and providing for the creation of the Railroad Credit Corporation, was analyzed by R. C. Fulbright, who stated that the committee appointed to handle this subject had not had an opportunity to discuss the carriers' plan, but would do so in the near future and would then submit a formal report to the league. Mr. Fulbright contended that it was evident, following the meeting of the Railway committee and the league committee at Atlantic City, that the railroads would not adopt the pooling plan suggested by the commission. He stated that because, under the carriers' plan, loans must be secured by collateral, because the recipient must repay the amount borrowed in two years and cannot renew for more than two years, credit will not be improved. He said that since the carriers wish to strike out the clause which provides that if a railroad makes a reduction in the increase in rates allowed under the decision of the commission, it must make the reduction out of its basic or present rates, the new plan makes it possible for carriers to withdraw from the pool. He said that since no advance or loans shall be made to a carrier already in default or in receivership; to a carrier which derives less than 50 per cent of its revenue from freight transportation; to a carrier which is able to meet its fixed charges from its earnings, other income or other resources; to a carrier which with the aid of a loan from the corporation would still be unable to meet its fixed charges or to avoid a default; to a carrier by water; or to a carrier which has not complied in full with its obligations, very few carriers would be benefited. His main criticism of the plan, as modified by the carriers, was that the modification did not state what railroads or what number of railroads have agreed to the plan.

Canada's Transport Inquiry Body Named

THE Rt. Hon. Lyman P. Duff, judge of the Supreme Court of Canada, will head the Royal commission to inquire into railway problems in Canada. The other members of the body will be: Rt. Hon. Lord Ashfield of Southwell, chairman of the London Underground Railways; Sir Joseph Flavelle, banker of Toronto; Beaudry Leman, banker of Montreal; L. F. Loree, president of the Delaware & Hudson; Dr. Walter C. Murray, president of the University of Saskatchewan; and Dr. J. C. Webster, Shediac, N. B., representing the Maritime provinces.

The whole problem of transportation in Canada, "particularly in relation to railways, shipping and communication facilities therein, having regard to present conditions and the probable future development of the country," is to be inquired into by the commission. The order-in-council approved last week by the Governor-General further provides:

"That the commissioners shall have all the powers vested in, or which can be conferred on, commissioners under the Inquiries Act, and that all or any of the powers which can be conferred under part III of the Inquiries Act may be exercised by any three of the commissioners.

"That the commissioners or any three of them shall have power to call before them such persons as they shall judge likely to afford any information on the subject; to call for information in writing and also to call for, have access to and examine all such books, documents and records as may afford the fullest information on the subject; and to inquire of and concerning the premises by all other lawful ways and means whatsoever.

"That the departments of the Government Service of Canada and the Board of Railway Commissioners for Canada shall afford the commissioners and all persons acting under their authority or by their direction, such assistance and co-operation in the matters of the inquiry as the commissioners may think desirable. That the commissioners shall report their findings and conclusions with the least possible delay."

Prefacing the powers conferred upon the commissioners, the order-in-council states: "Having regard to the vital importance of transportation to the trade and commerce of Canada, the serious and continuing deficits of the Canadian National Railway system, and the diminished revenues of the Canadian Pacific Railway system, conditions which have been brought about in part by duplication of tracks, facilities and services of every kind, and in part by competition by other modes of transportation, particularly motor vehicles operating on highways," the proposal that the whole subject be studied by the commissioners with the powers set forth had been concurred in.

Sittings of the commission will likely open shortly before the middle of December.

Who Pays for Highways?*

WHO pays rural highway costs in the United States? The answer is: The taxpayer. The next natural question would be: Well, what about the user of the highways—doesn't he pay for them, too? And the answer to that question is: He pays part of the cost of rural highways, but the taxpayer pays approximately two-thirds, or about twice as much as the user.

But that isn't the worst feature of the matter, according to S. S. Wyer, consulting engineer of Columbus, who has made an exhaustive study of road-building costs.

The tragic part of this matter is that in many instances the road is entirely worn out and replaced by a new one before the old one is paid for. There are numerous instances on record where highway bonds have not been retired, while the highways they were issued to finance long since have worn out and been rebuilt, or perhaps have been abandoned entirely.

The taxpayers hold the bag, according to Mr. Wyer—they are the ones who have to pay, ultimately.

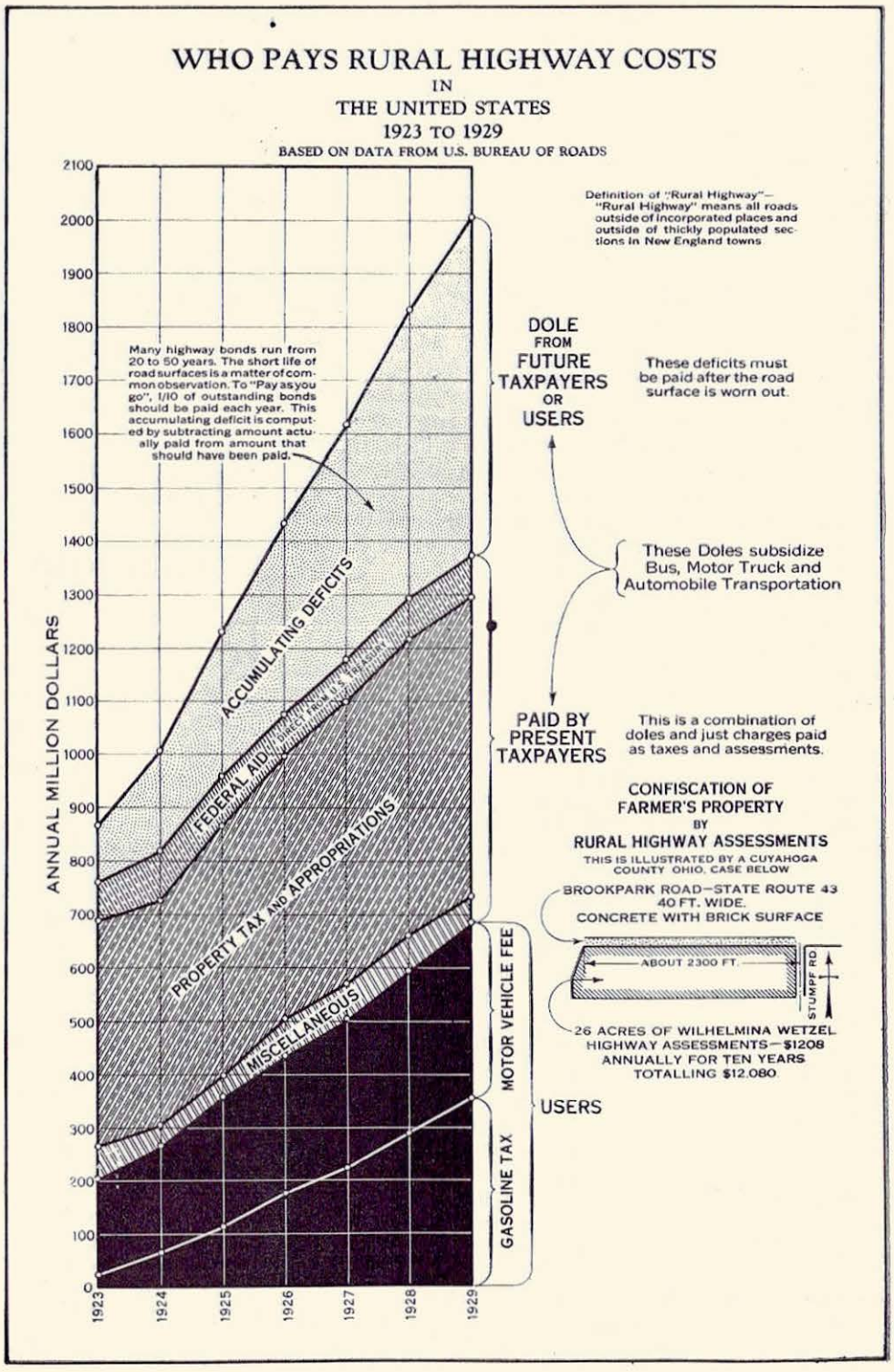
Let us look at Mr. Wyer's chart on this page. We find that in 1923, the United States spent approximately $860,000,000 on roads. Not bad, perhaps, but the bill is increasing annually, by leaps and bounds. In 1924 it was $1,000,000,000. In 1925, $1,230,000,000. And so on, until in 1929, it was $2,000,000,000.

Now let us examine these totals, take them apart, and see of what they are made up. Take 1923—$860,000,000. Approximately $25,000,000 came from gas tax; $180,000,000, motor vehicle license fees; $400,000,000, property tax and appropriations (now we're getting into the part the taxpayer pays); $75,000,000, federal aid, direct from the United States treasury; and accumulating deficits from unretired bonds for roads that have long been "retired," $100,000,000.

But how the figures have changed by 1929! The gas tax income has grown from $25,000,000 to $350,000,000. License fees' share of road costs has grown from $180,000,000 to $300,000,000. Those are the shares the users pay, and those increases seem fair enough.

However, the increase goes on when we come to the taxpayers' side of the story; the share from property tax and appropriations has grown from $400,000,000 to $550,000,000; Federal aid has stayed practically stationary. But what an alarming increase we find in "accumulating deficits!" The 1929 deficit, our debt for the roads of yesterday, is six times as great as the 1923 deficit. And each year in between has added its quota to the staggering deficit burden.

"At this rate," according to Mr. Wyer, "our grandchildren will still be paying for roads we wore out when we were young. Is it fair to burden future generations with our expenses? They'll have expenses of their own



* Reprinted from the September 31 issue of Farm Bureau News, official publication of the Ohio Farm Bureau Federation.

Consolidated Rural Highway Data for All States, Counties, Townships and Districts

Data from records of U. S. Bureau Public Roads

		Basic data and computations in "Million Dollars"						
		1923	1924	1925	1926	1927	1928	1929
"A"	Federal Aid	72.3	91.4	92.1	79.1	80.1	80.7	77.5
"B"	Property tax & appropriations	423.4	421.6	467.7	491.1	527.4	553.1	560.8
"C"	Miscellaneous	60.8	39.9	39.	69.4	69.	63.7	47.9
"D"	Motor Vehicle fees	181.5	200.7	246.3	262.4	280.1	309.5	329.9
"E"	Gasoline tax	24.2	64.9	114.1	174.	223.6	287.9	357.7
		762.2	818.5	959.2	1076.	1180.2	1294.9	1373.8
"F"	Bond interest paid	23.7	29.8	79.7	100.3	108.5	117.4	124.
"G"	Bonds outstanding—Jan. 1	1447.9	1621.	1799.3	1988.5	2148.	2283.7	2425.2
"H"	Bonds issued during year	213.9	255.5	285.8	272.4	272.	271.7	271.8
"I"	Line "G" plus line "H"	1661.8	1876.5	2085.1	2260.9	2420.	2555.4	2697.0
"J"	Bonds paid during year	40.8	77.2	96.6	112.9	136.3	130.2	148.3
"K"	Line "I" minus line "J"	1621.	1799.3	1988.5	2148.	2283.7	2425.2	2548.7
"L"	1/10 of line "G" in even millions	145.	162.	180.	199.	215.	228.	243.
"M"	Line "J" in even millions	41.	77.	97.	113.	136.	130.	148.
"N"	Deferred bond payment, line "L" minus line "M"	104.	85.	83.	86.	79.	98.	95.
			104.	189.	272.	358.	437.	535.
"O"	Accumulating deferred bond payments	104.	189.	272.	358.	437.	535.	630.

NOTES

Lines "A" "B" "C" "D" "E" p. 9 "1929 Edition Highways Handbook" & photostat sheets F-1 & F-4
Line "F" ..... p. 15 " " " " & " " F-2 & F-5
Line "G" ..... p. 19 " " " " & " " F-1 & F-4
Line "H" ..... p. 9 " " " " & " " F-1 & F-4
Line "J" ..... p. 15 " " " " & " " F-2 & F-5

Line "L" above is computed on following basis: "Many highway bonds run from 20 to 50 years. The short life of road surfaces is a matter of common observation. 1/10 of the outstanding bonds should be paid each year."

Line "N" is the annual accumulating deficit computed by subtracting the amount actually paid from the amount that should have been paid.

Note—This table and accompanying chart prepared by Samuel S. Wyer. Copies of chart available from Fuel—Power—Transportation Educational Foundation, Beggs Building, Columbus, Ohio.

without having to assume our unpaid bills.

"The remedy is to keep bonds within the life of the investment, and not pass on more deficit to future generations. One-tenth of outstanding bonds should be paid or retired each year—that is, life of the bonds should not be permitted to extend over ten years."

Mr. Wyer cited examples of bonds which are too long-lived. New York he said has outstanding $100,000,000 of fifty-year bonds; Michigan has $43,000,000 of twenty-year bonds; Illinois has $146,000,000 of twenty-thirty year bonds. Ohio, fortunately, has a law which now makes it a requirement that bonds mature and be retired in ten years.

This, Mr. Wyer said, will prevent growth of the accumulated deficit, and in time probably will eliminate it. But we still have the problem of the users who pay only about one-third of highway costs. What about them?

Well, what about an excise tax? Railroads in Ohio now pay four per cent of income to the state as an excise tax, on intrastate business, and in 1933 will pay three per cent. Motor trucks and busses, owned and operated by big commercial transportation companies, constitute one of the greatest sources of wear on our highways, yet these companies pay no excise tax in Ohio.

They should, for that would take much of the burden of growing highway costs off the already-overloaded shoulders of the taxpayer and place it where it belongs—on the shoulders of those who use the roads most.

"The taxpayers of the United States in 1929 paid a 'dole' of 1,300,000,000 dollars to the motor truck, bus and auto," Mr. Wyer said, and then he voiced a warning: "The oil industry, failing in handling its own field problems, is now urging government doles for superhighway construction to increase motor truck and bus use in order to get an increased market for surplus gasoline."

There is considerable food for thought, especially on the part of farmers, on these figures of Mr. Wyer's. Your special attention is called to the small chart at the right of the big chart with this article, headed "Confiscation of Farmer's Property by Rural Highway Assessments." Certainly a $1,208 annual highway assessment on 26 acres of ordinary farm land seems confiscatory. What do you think? The Farm Bureau is now working to correct this particular injustice and many similar ones. With the wholehearted support of the membership, it can be successful.

Caldwell Continuous Blow-Off

RECOGNIZING the fact that most of the cases of dirty steam in boilers are caused by foaming, The Perry-Caldwell Manufacturing Company, Birmingham, Ala., has developed a device for locomotive boilers known as the Caldwell continuous blow-off the primary function of which is to remove the causes of foaming by the accurate control of the critical point of concentration. This device is also designed for use on boilers other than those in locomotive service and is said to prevent the accumulation of mud or silt, reduce the amount of scale formation and produce dry steam.

The construction of the Caldwell blow-off is shown in one of the illustrations. It consists essentially of a sediment intercepting chamber constructed to withstand boiler pressure. The water from the boiler enters the chamber through an inlet pipe and is conducted to a point near the bottom of the chamber. The sectional area of the chamber is sufficiently large to reduce the velocity of the water passing upward to such an extent that any solid particle large enough to obstruct the orifice in the discharge pipe will be dropped by gravity to the bottom of the chamber, allowing the more finely divided particles such as mud or sludge, as well as all salts in solution, to rise and pass out through the orifice. The elongated orifice, due to its design and the material of which it is made, will successfully withstand erosion for a long time. In cases of wide variation of boiler ratings, two or more orifices of different sizes are provided with suitable valve controls for operating

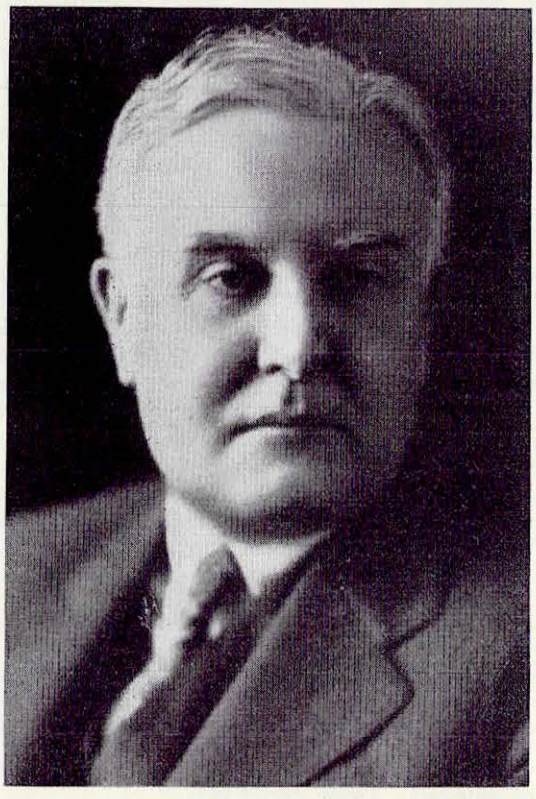
(Continued on page 832)

Elsey Elected Western Pacific President

Executive vice-president of railway succeeds H. M. Adams on January 1—Adams to retire from business

H. M. ADAMS, president of the Western Pacific since April 1, 1927, has resigned, effective January 1, 1932. His successor will be Charles Elsey, now executive vice-president of the railway.

Following the acceptance of his resignation by the board of directors, Mr. Adams issued a statement which read in part as follows: "In resigning my office with the Western Pacific, I am following a plan which I have had for many years, having entertained the hope that it might be possible for me to retire at a time when I might reasonably expect to enjoy some years of private life. It may be recalled that I resigned from the service of the Union Pacific at the end of 1926 so that Mrs. Adams and I might return to California to live. The office which I have occupied with the Western Pacific was tendered me thereafter and, the company's headquarters being in San Francisco, I was glad to accept it. I shall continue to live in San Francisco."



Harry M. Adams

Charles Elsey

Mr. Adams assumed the presidency of the Western Pacific at a time when an impressive program of physical betterments and of developing new sources of traffic was in its inception. He leaves it after four years and nine months of service, with that program well on to completion. In 1927, an $18,000,000 improvement program was instituted. This called for a general modernization of the main line, including new rail and ties, new ballast, bank widening, additional side tracks, new bridges and improved station facilities. This program has been pushed forward steadily, improvements to cost $3,000,000 having been scheduled for 1931. This year's program called for the laying of 110-lb. rail to replace 85-lb. rail on 60 miles of main line in Nevada and for the purchase of 5 Mallet locomotives. The construction of additional passing and yard tracks and further improvement of the roadway and track were on this schedule.

Fully as striking as its program of betterment has been the determined way in which the Western Pacific, under Mr. Adams' leadership, has extended its lines into regions originating heavy traffic. Originally a bridge line, which originated relatively little traffic, it is now originating on its own lines, or those of recently acquired feeders, an increasing amount of high-grade tonnage. It has developed a substantial traffic in California fruits, due to its construction or acquisition of feeder lines which tap the perishable-freight producing areas of California. This is indicated in the classification of freight handled on the Western Pacific. In 1927, 23 per cent of its tonnage was forest products, and 34 per cent was products of mines, while in 1930, only 6 per cent of the tonnage was forest products and 35 per cent was products of mines. On the other hand, agricultural

products, which represented only 13 per cent of the 1927 tonnage, comprised 24 per cent of the tonnage handled in 1930, while manufactured products increased from 24 per cent in 1927 to 29 per cent in 1930.

New Lines Constructed

In 1928 the Western Pacific organized the Western Pacific California Railroad for the purpose of constructing 174 miles of railway lines in California, including a 25-mile line from San Francisco to Redwood City to connect with the Western Pacific at Niles, a 138-mile line from Nile Garden, south of Stockton, to King's River, south of Fresno, and two other short branches into agricultural areas. The San Francisco-Redwood City line, the construction of which was authorized early this year by the Interstate Commerce Commission, will give the Western Pacific all-rail access to San Francisco. Its traffic resources have been further enhanced recently by the acquisition of a one-third interest in the Central California Traction Company, extending from Sacramento, Cal., to Stockton.

The most significant extension constructed by the Western Pacific in recent years was completed only this month. It is the line from Keddie, Cal., to Bieber, 112 miles, connecting at that point with the Great Northern and providing a new through all-rail route between the Pacific Northwest and California, and also a new route from eastern points to California by way of the Pacific Northwest.

Operating revenues of the Western Pacific increased from $16,057,065 in 1926 to $17,687,896 in 1929, falling off to $16,298,581 in 1930. At the same time, operating expenses increased from $11,275,140 in 1926 to $14,438,043 in 1929, but were reduced to $13,152,839 in 1930. Net revenue from operations declined from $12,781,925 in 1926 to $3,145,742 in 1930. So far this year, due to conditions from which all railways are suffering, the revenues of the Western Pacific have continued to decline, operating revenues for the first nine months of this year having been $9,554,625, while operating expenses were $8,836,056, leaving a net from railway operation of $718,569. There was a net railway operating deficit for the first nine months of this year of $93,510, compared to net railway operating income for the first nine months of 1930 of $717,646.

Physically and from a potential traffic standpoint, the Western Pacific has been vastly improved under Mr. Adams' administration, although Mr. Elsey assumes executive charge of the road's affairs at a time when traffic is at a low ebb. Having been associated with the Western Pacific since the days of its construction however, and having specialized in financial matters, Mr. Elsey is well fitted to take charge of the property at one of the most crucial periods in railway history.

Harry M. Adams

Harry M. Adams was born on January 3, 1867, at Camanche, Iowa, and entered railway service in 1880 as a messenger on the St. Louis & San Francisco. In 1886, after having held various positions in station service on that railway and on the Southern Kansas (now a part of the Atchison, Topeka & Santa Fe), he was appointed chief clerk in the general baggage department of the Southern Kansas, later becoming cashier in the local freight office. In 1887, he was appointed chief clerk in the general baggage department of the Oregon Railroad & Navigation Co. (now the Oregon-Washington Railroad & Navigation Co.), and two years later was made division baggage agent of the Union Pacific at Portland, Ore. For three months in 1890, he was advertising agent at Portland, leaving railway service in June, 1890, to become baggage agent of the United Carriage & Baggage Transfer Co. at Portland. Part of the years 1893 and 1894 he spent in South America, returning to this country in March of the latter year to become a ticket clerk on the Union Pacific. He was appointed clerk in the general freight office at Portland in 1894, and was promoted to traveling freight and passenger agent in 1895. He was made chief clerk in the general freight department in 1897, and was appointed general agent at Spokane, Wash., in 1898. He was promoted to assistant general freight agent at Portland in 1902, but left the Union Pacific System in 1905 to become assistant traffic manager of the Great Northern at Seattle. Mr. Adams was appointed general freight and passenger agent of the Spokane, Portland & Seattle in 1907, and saw his first service with the Western Pacific three years later, when he was appointed freight traffic manager. From 1914 to 1917, Mr. Adams was general traffic manager of the Missouri Pacific, being elected vice-president in the latter year. During the period of federal control, he served as chief of Inland Traffic Service in the United States Railroad Administration, and as traffic assistant to the regional director at St. Louis, Mo. Mr. Adams was elected vice-president in charge of traffic of the Union Pacific System in 1919, and held that position until he resigned at the close of 1926. He was elected president of the Western Pacific early in 1927 and assumed the duties of that office on April 1 of that year.

Charles Elsey

Charles Elsey was born at Oakland, Cal., on September 18, 1880, and entered railway service in October, 1907, during the early construction period of the Western Pacific. His first position was that of assistant treasurer. He was later promoted to treasurer, and in 1921 was elected vice-president in charge of finance. Mr. Elsey was elected executive vice-president in September, 1929, and he has held that position continuously up to the present time. He has also been secretary-treasurer of the Deep Creek Railroad and president of the Tidewater Southern.

Early Action on Wages Anticipated

(Continued from page 821)

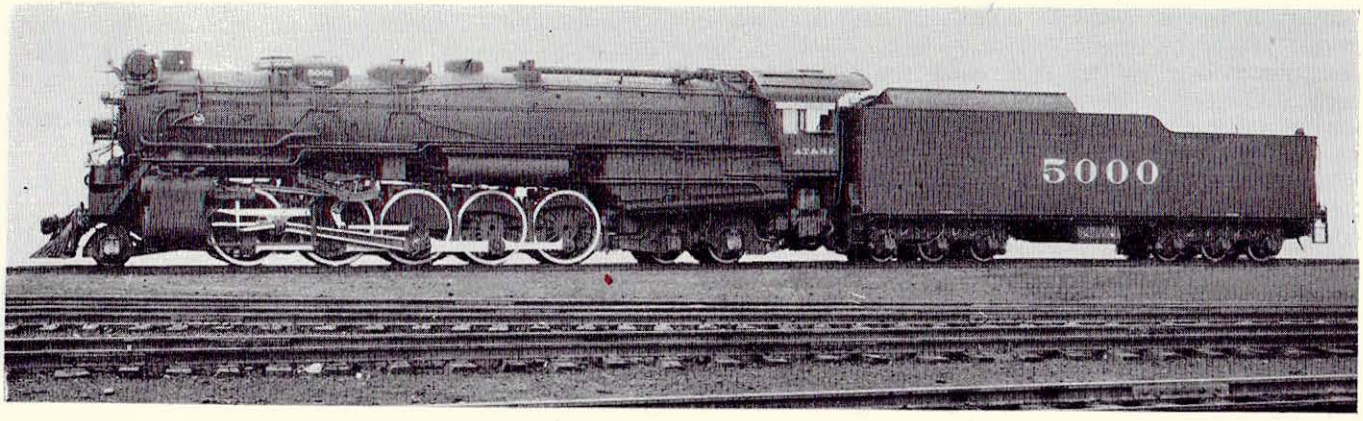
wages to pay for insurances or voluntary pension payments by some railroads. There should be—

(a)—An elective federal compensation law to indemnify against occupational accidents and diseases.
(b)—A federal law to provide retirement insurance.

Such a compensation law would save a huge waste of money in litigation. The retirement law would save the waste of continuing employment beyond the time of efficient service. There should be a provision made for the payment of a dismissal wage in all cases of permanent dislocation of experienced employees.

There should also be worked out a provision for payroll reserves to take care of exceptional periods of reduced traffic, —which would provide a workable and economical substitute for unemployment insurance. The stabilization of employment should operate to reduce this liability to a minimum.

These reserves should be created by an appropriation of surplus up to the amount estimated as necessary to maintain earnings of employees during periods of depression. In such periods hours of service could be reduced without reduction of earnings, with payment of added cost of employing same number of men for less traffic to be borne out of employment reserves. Thereby there would be no payments for idleness but increased payments for units of work—maintaining the total purchasing power with resulting public benefit.



Locomotive 5000 Tested on the Pecos Division

Santa Fe Locomotive 5000 Tested

Modern 2-10-4 type engine handles 15 per cent more tonnage in 9 per cent less time and with 17 per cent less unit fuel consumption

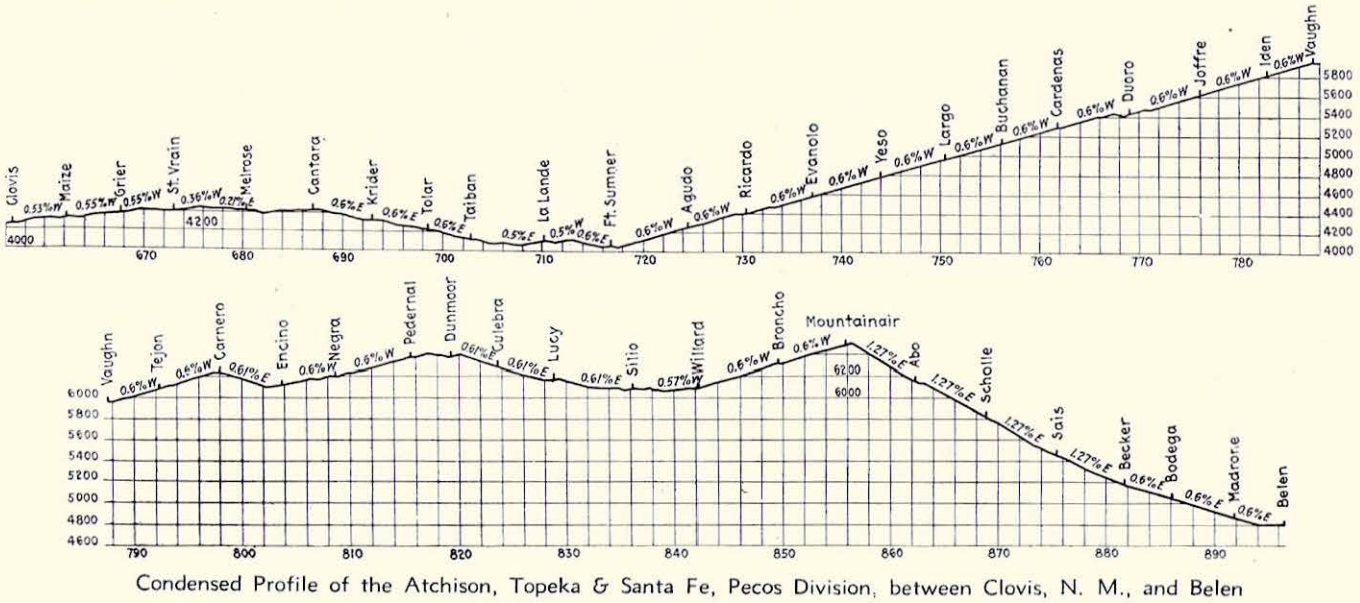
THE Atchison, Topeka & Santa Fe received a modern 2-10-4 type locomotive, No. 5000, from the Baldwin Locomotive Works in December, 1930, and placed it in service at Clovis, N. M. Subsequently, during the months of July and August, this locomotive was tested with a dynamometer car in freight service on the Pecos division between Clovis, N. M., and Belen. Since Locomotive 5000 was the only one involved in this test, comparisons can be made only with previous tests of other locomotives. As compared with Santa Fe 2-10-2 type locomotives of the 3800 class, for example, tested in the summer of 1930, the new locomotive will handle approximately 15 per cent more tonnage in 9 per cent less time and with 17 per cent less coal per 1,000 gross-ton-miles.

When compared with motive power which was considered strictly modern only five years ago, therefore, the new Santa Fe 5000-class locomotive promises not only to effect important savings in fuel but to permit handling heavier train loads on shorter schedules. The resultant marked reduction in train-hours per ton handled, tendency to eliminate overtime, and minimizing labor and fuel costs due to delays will have a highly favorable effect upon operating expenses. In addition the important objective will be achieved of giving better service to shippers.

Principal Features of the Locomotive Design

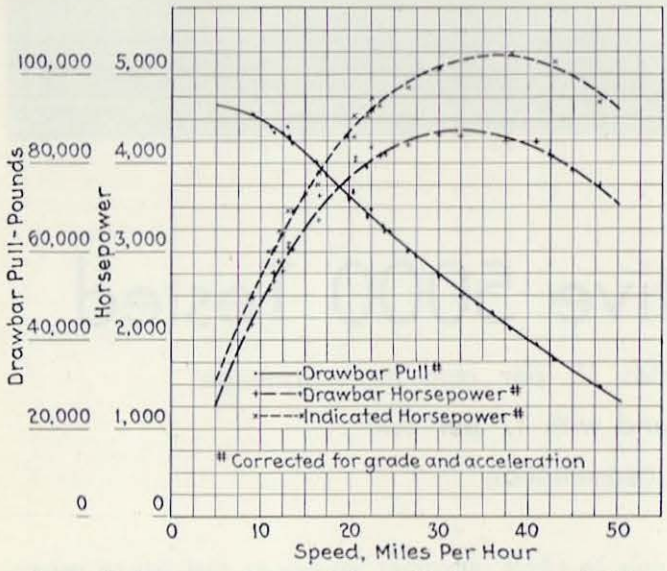
Locomotive 5000 is designed with a greater ratio of boiler capacity to tractive force than is generally used. It is of the 2-10-4 type; carries 300-lb. boiler pressure; and is limited to 60-per cent maximum cutoff. The main steam valves have 3-in. steam lap, ⅛-in. exhaust lap and maximum travel of 9-27/32 in. forward and 9⅜ in. backward motion.

Special equipment is as follows: Type E super-



Condensed Profile of the Atchison, Topeka & Santa Fe, Pecos Division, between Clovis, N. M., and Belen

heater; American multiple throttle; Elesco feedwater heater located on top of the smoke arch; Elesco C. F. pump, located on the left side under the cab deck and back of the left trailer wheels; Standard stoker; Walschaert valve gear; Ragonnet reversing gear; Chapman-Lanning auxiliary starting valves; Chicago mechanical lubricator; two Nicholson Thermic Syphons in the firebox and one in the combustion chamber; two 8½-in. cross-compound air pumps, located under the smoke



Power Performance Curves of Santa Fe Locomotive 5000

arch inside the line of the main valves and supplied with superheated steam; round-hole table grates; Muchnic sectional bullring packing, with three sets of bronze rings on each piston head. The engine truck has outside journal bearings. The main rods are of the Lima tandem type. The general characteristics and dimensions of the locomotive are shown in a table.

The Santa Fe dynamometer car was used to record drawbar pull, speed, rate of firing, rate at which water

General Characteristics and Dimensions of Santa Fe Locomotive 5000

General classification	2-10-4
Service	Freight
Fuel	Coal
Tractive force, lb.	93,000
Weight in working order, lb.:	
Locomotive:	
Engine truck	41,100
Drivers	348,200
Trailer	113,300
Total	502,600
Tender	283,000
Total, locomotive and tender	877,600
Boiler:	
Diameter, in.	104
Working pressure, lb. per sq. in.	300
No. of 2¼-in. flues	61
No. of 3½-in. flues	350
Length between flue sheets, ft.-in.	21-0
Firebox:	
Length, in.	162
Width, in.	108
Grate area, sq. ft.	121.5
Diameter of stack, in.	27
Number of arch tubes, 3½-in.	2
Number of Nicholson Thermic Syphons:	
Firebox	2
Combustion chamber	1
Heating surface, sq. ft.:	
Firebox	443
Arch tubes	22
Syphons	127
Flues: 2¼ in.	750
3½ in.	4,770
Total evaporating surface	6,143
Total superheating surface	2,550
Cylinders:	
Diameter, in.	30
Stroke, in.	34
Driving-wheel diameter, in.	69
Valves:	
Diameter, in.	15
Maximum travel, in.	9 27/32
Steam lap, in.	3
Exhaust lap, in.	⅛
Exhaust nozzle, Layden, four 3¾-in. (later changed to 3⅞-in.) openings, equivalent to 7½ and 7¾-in. single nozzles	
Dimensions of journals, in.:	
Main	14½ by 13
Front, lateral motion	12 by 14
Others	12 by 13
Trailers	9 by 14
Engine truck	8 by 14
Tender 6-wheel truck	7 by 13
Tender:	
Capacity water, gal.	20,000
Capacity coal, tons	27

General Performance of Locomotive 5000 in Freight Service Test Runs on the Pecos Division of the Santa Fe

Run No.	Duration of test: Total time hr.—min.	Duration of test: Running time hr.—min.	Average speed m.p.h.	Train stops, total	Cars: ld. empty	Gross tons	Gross ton-miles, thousands	Total coal, lb.	Water evaporated, gal.	Ratio, water to coal	Coal, lb., per 1,000 ton-miles	Water, lb., per 1,000 ton-miles
Westbound: Clovis to Vaughn, 130.8 Miles; Ruling Grade, 0.6 Per Cent												
1	6—36	6—02	21.7	3	51— 73	4,130	540.1	47,500	37,412	6:54	88.0	575
3	6—22	5—29	23.8	4	29—103	4,154	544.0	45,500	37,740	6:89	83.6	576
5	7—09	6—10	21.2	4	48— 98	4,409	577.0	56,250	41,718	6:16	97.5	600
7	5—27	5—03	25.9	4	56— 55	3,765	492.5	44,300	34,663	6:50	89.9	584
9	6—27	6—03	21.6	3	56— 81	4,491	588.0	50,300	40,335	6:65	85.5	569
11	8—27	6—02	21.7	5	{77— 24 {77— 22	{5,055 {5,000	656.0	57,300	46,384	6:72	87.3	587
Average	6—47	5—50	22.7	4	53— 72	4,327	566.2	50,191	39,709	6:58	88.6	582
Vaughn to Belen, 109.0 Miles; Ruling Grade, 0.6 Per Cent												
1	5—00	4—30	24.2	5	49— 72	4,003	436.4	27,500	19,770	5:96	63.0	376
3	4—34	4—01	27.1	3	25—101	3,937	428.0	25,300	17,960	5:89	59.1	348
5	6—33	5—36	19.5	5	{45—100 {43—100	{4,389 {4,319	475.5	30,400	23,770	6:49	63.9	415
7	4—57	4—27	24.5	5	56— 50	3,660	399.0	23,200	18,140	6:50	58.1	377
9	4—37	4—04	26.8	3	56— 81	4,491	489.5	25,400	20,460	6:69	51.9	347
11	6—02	4—47	22.8	7	76— 24	4,999	541.0	31,150	25,200	6:70	57.6	386
Average	5—17	4—34	24.2	5	51— 71	4,242	461.6	27,158	20,883	6:38	58.9	375
Eastbound: Belen to Vaughn, 109.0 Miles; Ruling Grade, 1.25 Per Cent												
2	6—17	5—56	18.4	3	115— 3	5,331	488.2	40,000	29,760	6:18	81.9	506
4	5—36	5—10	21.1	3	120— 1	5,720	524.0	42,200	29,000	5:70	80.5	459
6	6—30	5—32	19.7	6	110— 8	5,497	507.4	39,750	29,912	6:24	78.3	489
8	4—55	4—30	24.2	4	112— 1	5,414	496.0	39,500	28,973	6:09	79.8	486
10	5—03	4—16	25.5	6	{64— 3 {176— 4	{3,200 {4,157	399.8	37,800	28,234	6:20	94.5	586
12	8—50	5—35	19.5	6	129— 1	5,999	550.1	55,850	38,385	5:70	101.5	579
Average	6—12	5—10	21.4	5	110— 3	5,272	494.3	42,517	30,711	6:01	86.1	517
Vaughn to Clovis, 130.8 Miles; Ruling Grade, 0.6 Per Cent												
2	5—33	4—20	30.2	6	115— 3	5,331	697.3	23,600	18,465	6:50	33.8	220
4	5—45	4—49	27.2	6	{120— 1 {123— 1	{5,720 {5,825	754.4	24,900	20,453	6:82	33.0	225
6	4—15	3—56	33.3	5	110— 8	5,497	718.0	21,750	15,350	5:86	30.3	177
8	4—42	4—14	30.9	5	112— 1	5,414	708.0	19,200	15,687	6:78	27.1	184
10	5—12	4—22	30.0	5	114— 8	6,014	787.0	23,050	19,842	7:14	29.3	209
12	4—46	4—22	30.0	3	129— 1	5,999	784.0	21,550	16,575	6:38	27.5	175
Average	5—02	4—20	30.3	5	117— 4	5,670	741.4	22,341	17,729	6:59	30.2	198

was supplied to the boiler, air-brake operations, time of passing stations, starting and stopping. Cab readings included boiler pressure, steam-chest pressure, back pressure, position of the throttle, reverse gear, temperature of superheated steam entering the valves, temperature of smokebox gases, and the readings of a valve pilot, a device applied by the Valve Pilot Corporation which kept a record of the speed and position of the reverse gear.

Crosby steam-engine indicators were used to determine the steam distribution in the cylinders, and two 4-in. hot-water meters were used, one on the suction line of the pump, the other on the injector to record the amount of water delivered by either, which was recorded on the chronograph chart. Check readings were also made by means of gage boards on the tender. An electric contact was attached to the stoker conveyor which recorded the revolutions. Temperatures were taken of the feedwater before entering and after leaving the feedwater heater. The amount of cinders thrown from the stack was determined by a catcher in the form of a sector placed over the stack covering about 1.95 per cent of the area, diverting the cinders caught into a container. From the amount of cinders caught, the total amount discharged was determined.

The coal consumption was determined by leveling the top at the beginning of a trip, filling to the same level at the end, and taking the weight shown by the coal-chute scales.

The test was made on the first and second districts of the Pecos division between Clovis and Belen. The ruling grade is 0.6 per cent westbound. Eastbound it is 1.25 per cent from Belen to Mountainair and 0.6 per cent from Mountainair to Clovis. Helpers are used on the 1.25-per-cent grade, though Locomotive 5000 was used alone on Run 10.

The locomotive was handled by pool crews which changed at Vaughn going in either direction. The road foreman of engines or the fuel supervisor accompanied all trips to assure uniform handling and full boiler pressure. The locomotive was operated with a wide-open throttle where conditions permitted.

In computing and compiling data taken during the test, the division has been divided at Vaughn and data averaged for each direction on each district for more ready comparison of the locomotive's performance under different conditions.

Representative indicator cards taken at various speeds, and power performance curves showing maximum drawbar pull, and drawbar and indicated horsepower at various speeds are shown.

This locomotive had extraordinary capacity for sustained power at high speeds, which is reflected by power performance curves. It exerted a drawbar pull of 50,000 lb. at 33 m.p.h., equivalent to 4,350 drawbar horsepower, at which it had a machine efficiency of 84 per cent. With a drawbar pull of 82,500 lb. at 15 m.p.h., the machine efficiency was 90.0 per cent.

The indicator cards show a very good steam distribution. The pair at 4.5 m.p.h. were taken with the Chapman-Lanning starting valves open at approximately 4½ m.p.h. on 1¼-per cent grade. The pair at 9 m.p.h. were taken immediately after the first pair, with starting valves closed. The indicated tractive-force curve shows the effect of having the starting valve open which

General Summary—Average of Eastbound and Westbound Runs

Total time on road, hr. min.	5-50
Total dead time, hr. min.	0-51
Total running time, hr. min.	4-59
Speed, m.p.h.	24.7
Train stops, total	5
Train:	
Loads	83
Empties	37
Total cars	120
Gross tons	4,878
Gross ton-miles (thousands)	565.9
Work, million ft. lb.	18,086
Total coal as fired, lb.	35,552
Heat value per lb. coal, B.t.u.	12,585
Water from tank, gal.	24,929
Water to boiler, gal.	27,258
Water to boiler, lb.	226,224
Ratio, lb. water per lb. coal	6.39
Coal per 1,000 ton-miles, lb.	66.0
Coal per million ft. lb., lb.	2.03
Water per 1,000 ton-miles, lb.	418
Water per million ft. lb., lb.	12.89
Pressure, lb. per sq. in:	
Boiler	298
Valve chest	281
Cylinder, back pressure	12.4
Temperatures, deg. F.:	
Feedwater entering tank	75
Feedwater entering heater	101.7
Feedwater entering boiler	194
Superheated steam	655
Smokebox	498
Atmosphere	78
Exhaust steam	274
Draft, in. water:	
Header chamber	6.8
Smokebox	9.2
Combustion rates, coal, lb.:	
Total per trip	35,552
Per hr. total time	6,105
Per hr. running time	7,014
Per sq. ft. grate area	57.7
Per sq. ft. heating surface, boiler	1.14
Per sq. ft. boiler and superheater	0.81
Stack loss, lb.	4,809
Per cent of coal fired	13.7
Heat value of cinders, per lb., B.t.u.	8,535
Evaporation rates, water, lb.:	
Actual total per trip	226,224
Actual per hour running time	44,608
Equivalent evaporation from and at 212 deg. F.:	
Per hour running time:	
Boiler	47,890
Boiler and superheater	55,441
Boiler, superheater and feedwater heater	60,816
Per sq. ft. heating surface:	
Boiler	7.79
Boiler and superheater	6.39
Equivalent evaporation, per lb. of coal:	
Boiler	6.77
Boiler and superheater	7.83
Boiler, superheater and feedwater heater	8.61
Work performance:	
Mileage:	
Over division	120.04
Working steam	75.09
Drawbar pull, lb.:	
Average over division	28,442
Working steam	44,701
Million ft. lb.:	
Total	18,086
Per mile:	
Over division	150.44
Working steam	236.72
Per 1,000 ton-miles	31.96
Power performance:	
Boiler horsepower:	
Boiler	1,378
Boiler and superheater	1,604
Boiler, superheater and feedwater heater	1,761
Drawbar horsepower	1,833
Water per drawbar horsepower-hour, lb.	24.3
Coal per drawbar horsepower-hour, lb.	3.83
Thermal efficiency, per cent:	
Boiler	52.2
Boiler and superheater	60.4
Boiler, superheater and feedwater heater	66.4
Locomotive at drawbar	5.07

Tonnage Rating Locomotive 5000—Pecos Division—Summer Weather

Clovis to Ft. Sumner Vaughn to Belen Mountainair to Vaughn Vaughn to Clovis		Ft. Sumner to Vaughn		Belen to Mountainair	
No. of cars	Actual tons	No. of cars	Actual tons	No. of cars	Actual tons
120	6,000	100	5,000	65	3,200
125	5,940	105	4,940	70	3,165
130	5,880	110	4,880	75	3,135
135	5,825	115	4,820	80	3,110
140	5,770	120	4,765	85	3,085
145	5,715	125	4,710	90	3,065
150	5,660	130	4,660	..	....
155	5,610	135	4,610	..	....
160	5,560	140	4,560	..	....
165	5,510	145	4,515	..	....
170	5,460	150	4,475	..	....
175	5,410	155	4,440	..	....
180	5,370	160	4,405	..	....
185	5,330	165	4,370	..	....
190	5,300	170	4,335	..	....
195	5,270	175	4,330	..	....
200	5,240	...	....	..	....

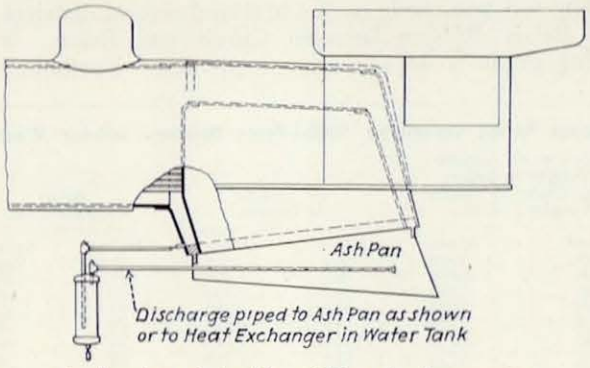
admits steam through a 1¼-in. pipe during the expansion after the valve has closed the main port.

The tractive force of the locomotive is calculated to be 93,000 lb., which, with a weight on the drivers of 348,000 lb., gives a factor of 3.75. The locomotive has shown over 93,000 lb. at the drawbar.

Caldwell Continuous Blow-Off

(Continued from page 826)

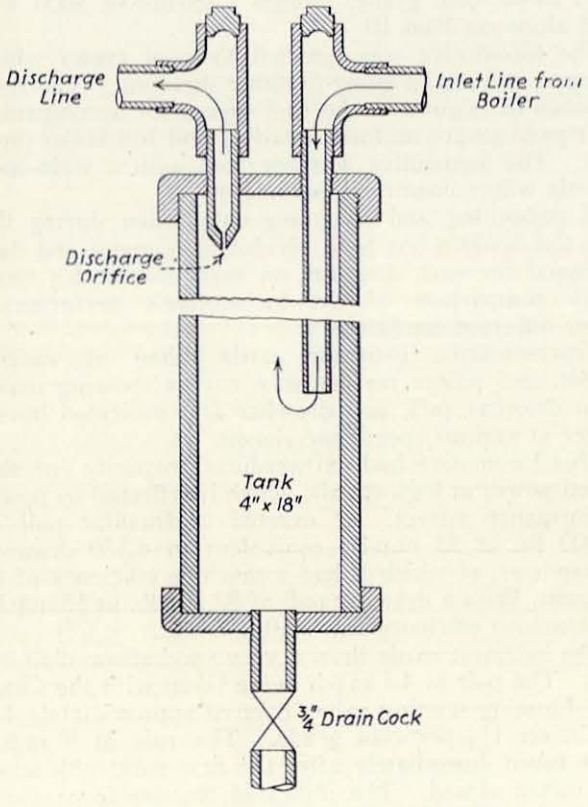
singly any one of the orifices. Removable plugs in the upper ends of both the inlet and discharge pipes facilitate cleaning in the case of stoppage by foreign matter.



Application of the Blow-Off to the Locomotive

A drain valve furnishes a means of periodically discharging the accumulated scale particles.

In operation the drain valve at the bottom of the blow-off chamber is closed and the boiler water passes continuously through the inlet pipes at boiler pressure. Under the influence of that pressure the water is continuously discharged through the orifice and outlet pipes either to a heat exchanger in the tender tank or to a point of disposal at virtually atmospheric pressure. Thus, with the differential or pressure drop from boiler to atmospheric pressure, the size of the orifice is governed so as to discharge a pre-determined amount of water depending on the size of the boiler, the rating at which it is operated, the boiler pressure and the character of the feed water. With these factors known it is a comparatively simple problem to determine the proper amount of water to be discharged continuously to maintain a degree of concentration slightly below the critical foaming point.



Sectional Elevation of the Blow-Off

Freight Car Loading

WASHINGTON, D. C.

REVENUE freight car loading is gradually showing smaller decreases each week as compared with last year's figures. In the week ended November 14 it amounted to 690,366 cars, a decrease of 26,663 cars as compared with the week before and a decrease of 138,657 cars as compared with the corresponding week of last year. As compared with 1929 this was a decrease of 292,560 cars. Loading of grain and grain products showed an increase as compared with both years, as the grain had been held back this year later than usual, and loading of livestock showed a small increase as compared with the previous week. The summary, as compiled by the Car Service Division of the American Railway Association, follows:

Revenue Freight Car Loading

Week Ended Saturday, November 14, 1931

Districts	1931	1930	1929
Eastern	153,596	183,407	217,101
Allegheny	131,317	164,702	204,865
Pocahontas	43,854	55,644	60,740
Southern	103,141	120,414	136,281
Northwestern	79,611	100,085	133,246
Central Western	112,799	134,747	152,033
Southwestern	66,048	70,024	78,660
Total Western Districts	258,458	304,856	363,939
Total All Roads	690,366	829,023	982,926
Commodities			
Grain and Grain Products	37,994	37,049	35,910
Live Stock	27,604	29,670	33,441
Coal	130,473	166,935	181,533
Coke	5,636	8,249	11,550
Forest Products	22,972	33,061	53,632
Ore	6,612	14,572	33,297
Mdse. L.C.L.	207,499	231,001	259,543
Miscellaneous	251,576	308,486	374,020
November 14	690,366	829,023	982,926
November 7	717,029	881,517	1,048,968
October 31	740,363	937,715	1,072,234
October 24	769,673	959,492	1,134,360
October 17	761,719	931,105	1,185,564
Cumulative total, 46 weeks	33,786,839	41,615,590	47,753,565

The freight car surplus for the first week in November averaged 559,278 cars, an increase of 24,024 cars as compared with the previous week. The total included 297,227 box cars, 198,325 coal cars, 25,765 stock cars and 10,845 refrigerator cars.

Car Loading in Canada

Revenue car loadings at stations in Canada for the week ended November 14 totaled 55,965 cars, a decrease from the previous week of 5,229 cars and a decline from the same week last year of 2,000 cars.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada		
November 14, 1931	55,965	21,802
November 7, 1931	61,194	21,886
October 31, 1931	61,296	23,162
November 15, 1930	57,965	30,736
Cumulative Totals for Canada		
November 14, 1931	2,296,333	1,166,044
November 15, 1930	2,843,851	1,529,713
November 16, 1929	3,184,865	1,890,837

Dry Kilns Reduce Lumber Stocks on N. P.

By A. M. Jackson*

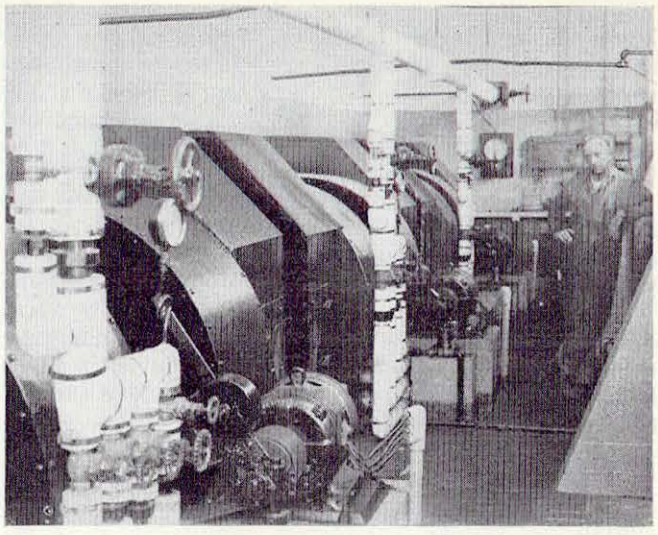
PRACTICALLY all items of West Coast species of lumber are now being seasoned in kilns under temperatures that range up to 200 deg. F. In air-drying, it is not possible to dry the lumber below the atmospheric humidity which is approximately 20 per cent throughout the Pacific Northwest. Kiln-drying affords a large saving in the handling cost and the storage period, also greater elasticity in operation, since the lumber is dried as required, thus eliminating the necessity of buying six months or a year in advance. Kiln-drying also reduces the degrades resulting from stain and mold, which are quite prevalent in certain species on the West Coast, particularly pine selects, clear fir and hemlock.

Few yards are laid out for the proper seasoning of lumber, but are built to suit local conditions, and are, for the most part, built for lumber storage rather than for lumber seasoning. The cost of a yard built strictly for seasoning would be greatly in excess of the amount now spent for such purposes. Yard seasoning is rapidly losing its popularity in view of the development of high-air-volume dryers which are much lower in cost per unit of output than other types of equipment and are capable of drying practically any thickness and grade of stock at either low or medium temperature.

The lumber yard of the stores department of the Northern Pacific at South Tacoma, Wash., has a kiln of the compartment or unit type, which was installed in the fall of 1925 to replace an old style kiln and which has been working steadily since that time.† Since its installation, the cost of carrying a lumber stock has been reduced more than one-fifth.

Modern Equipment Used

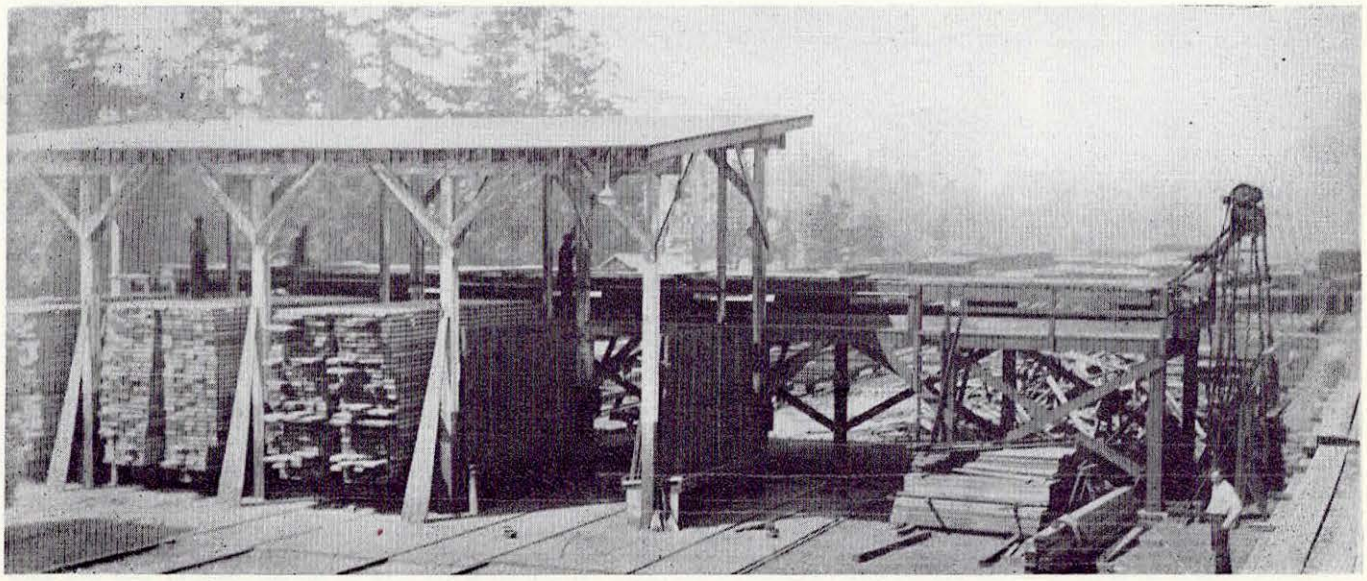
The kiln has four individual compartment ovens or dryers, each unit being 105½ ft. long, with a capacity for five 20-ft. loads of lumber. The control- or fan-room is in the rear of the kilns and contains the steam-spray or blower pipes, hot air tubes, fan motors and fan housings; also a Tycos recording thermometer for each kiln or unit.



Control and Fan Room of the South Tacoma Kilns

Practically all lumber dried is of a kind to which the steam-spray may be applied until a 100 per cent moisture content is reached. The hot air is then applied. In doing this, the so-called return method is used, whereby the hot air makes a second trip through the loads of lumber. The fan-blower forces this action. The lumber is loaded with the flange chimney through the center of the load from end to end.

In the far end of the control room is a small electric oven used in testing the dried lumber. A piece of board about 20 or 24 in. long is cut off and a section about three-quarters to one inch is taken out. This piece must be free from knots, rot, pitch, streaks or any other defect. It is weighed carefully and placed in the electric oven and, when the sample reaches a constant weight, it is removed from the oven and the oven-dry weight is subtracted from the kiln-dried weight, giving the weight of the moisture in the lumber in the kiln. The difference, divided by the oven-dry weight and multiplied by



At the Stacker Where Green Lumber Is Unloaded from Cars for Movement to the Kilns

* Stores Department, Northern Pacific, South Tacoma, Wash.

† For further information about these and other kilns on the Northern Pacific, readers are referred to the *Railway Age*, July 18, 1925, and Feb. 20, 1926.

100, gives the percentage of moisture content of the lumber being tested. If the operator finds practically the same moisture in several tests from different loads in the dryer, he knows that the steam-spray raised the humidity of the lumber to a 100 per cent moisture and that the hot air reduced the total contents of the kiln to the desired percentage of moisture.

Ten or twelve per cent is usually considered the most desirable moisture for lumber used in rebuilding box cars. The operator soon learns to arrive at the desired percentage with little or no difficulty. In case the surface of the lumber becomes too hard and the knots loosen, or if there is any inclination towards checking, cupping, twisting or warping, a few minutes of steam spraying will soon remedy most of the trouble and not affect the moisture content.

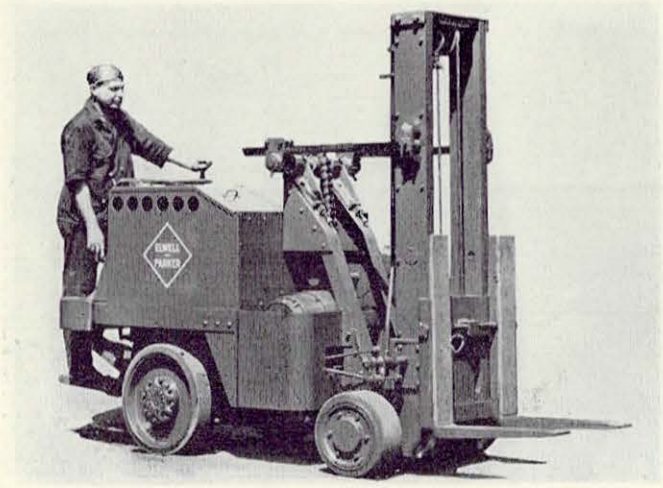
Yard Methods

The lumber yard at South Tacoma is now used almost entirely for storage and carries considerable stock for bridge and building requirements. This material, which requires very little drying, is assembled and held in storage until needed for installation. Most lumber under three inches in thickness is stocked by "self-crossing" or "stock-crossing", while materials over three inches in thickness are "crossed" with special crossers or stickers usually of one-inch material of narrow widths.

The yard men adhere strictly to the rule that weeds and other vegetation must be kept out of drying and storage yards. A layer of coal cinders over the yard helps greatly in keeping down this vegetation.

A Heavy-Duty Chisel Truck

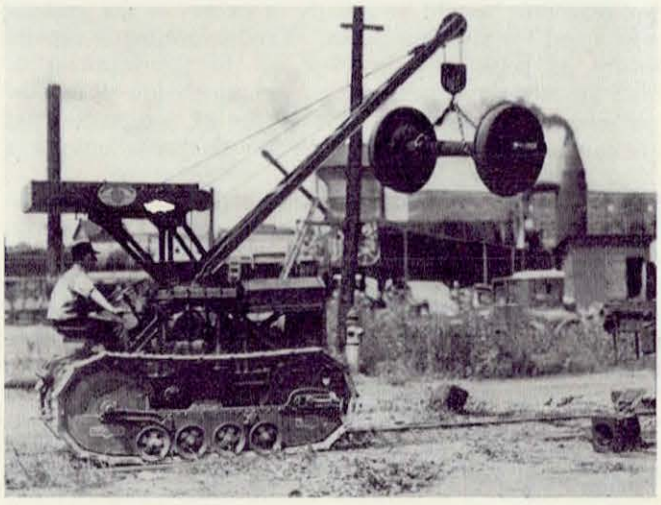
TO meet the demand for a heavier lift truck of the fork type, the Elwell-Parker Electric Company has developed a machine with 6,000-lb lifting capacity. This truck is built to accommodate either a battery or gasoline-electric unit, and uses 22-in. diameter wheels. The power plant has a three-point support to accommodate uneven runway. The forks are made in various lengths, with varying spreads to accommodate any material from bundled sheets to barrels and bales. After the forks are thrust under the load, the load may be tilted back 30 deg., which is sufficient to carry it safely to destination, where the load can be elevated 5 ft. for tiering. When high tiering is necessary, the uprights are made longer so that the fork carriage may ride to greater height, and, where head room is restricted, as in cars or through doorways, a telescoping upright can be furnished for the higher elevations. The machine is designed to retain all the flexibility of the lighter-capacity machines and incorporates the latest safety features and operating control arrangements.



A Tilting Truck with a Lifting Capacity of 6,000 Lb.

A New Tractor Crane

THE Hughes-Keenan Company, Mansfield, Ohio, has begun the manufacture of a gasoline tractor equipped with crawler treads, a swinging boom 10 to 20 ft. long, and a small drum on one side for special hoisting work. The boom is mounted on top of the tractor, operates through a full circle on a ball-bearing turntable, and is lowered and raised by power. The lifting capacity is 4,000 lb. at a radius of 6 ft., using stabilizers and counterweights, or 3,000 lb. at a 6-ft. radius. The crane will pass without difficulty through a door 5 ft. 6 in. wide and 7 ft. 6 in. high and is adapted for handling a wide variety of material and work around shops, storehouses, car tracks and construction projects. Provision has been made for assembling air compressors, arc-welding and a generator for magnet work, and it can also be equipped with a light clampshell for handling loose material. The operator has a clear view and the use of the tractor as a crane does not interfere with its use for drawbar work. One of these cranes is now in service on the Erie.



Combination Crane and Tractor with Crawler Treads

THE PUBLIC HEALTH DEPARTMENT of the Province of Ontario has recently received a completely equipped dental car, for use in the northern part of the province. The car, loaned to the Ontario government by the Canadian Pacific, was converted, at the railroad's Angus shops, from a sleeper into a dental laboratory, with living accommodations for a doctor and nurse. It will be maintained by the government, and will have free running rights over all northern Ontario railways.

Motor Transport Section

Better Station Facilities Increase Traffic

Pennsylvania Motor Coach Terminal, with good location and convenient equipment, enjoys 150 per cent traffic increase

By J. J. Reddington

Manager, Pennsylvania Motor Coach Terminal, New York

THERE are few steps as effective in stimulating traffic and increasing revenues as the provision of adequate terminal facilities. When the Peoples Rapid Transit Company inaugurated motor coach service between New York, Philadelphia, Pa., and Washington, D. C., the only terminal accommodations then available in New York were those of the old Waldorf-Astoria hotel. With the razing of the structure several years later, Mitten Management of Philadelphia, controllers of these motor coach operations, came to recognize the necessity of a terminal specifically designed to care for the requirements of bus passengers—one that would be of a permanent nature.

Considerable investigation ensued before the present site of the Pennsylvania Motor Coach Terminal at 242 West Thirty-Fourth street, directly north of the Pennsylvania railroad station, was accepted. At the time the lease was effected, the property was occupied by a number of small shops, necessitating extensive alterations prior to the formal opening of the terminal two years ago.

Operations and Traffic Increase

The ticket sales for the opening day totaled $144 and for the first three months averaged $600 daily. After four months of operation, however, the building proved too small for the terminal operations and a new building adjacent to the original structure was remodeled to form an additional unit.

At the present time, there are 17 tenants using the facilities of the Pennsylvania Motor Coach Terminal, including the Pennsylvania-Greyhound Lines, which had acquired the old Peoples Rapid Transit Company. All of these companies operate interstate service, but tickets are sold in the terminal only for the long distance lines, the coaches operating on short lines being equipped with fare boxes. The companies operating from the terminal, in addition to Pennsylvania-Greyhound Lines, include the Catskill Mountain Line, the Champlain Line, the Edwards Line, the Gray Line (to Atlantic City), the Eastern-Greyhound Lines, the Mergaugey Bus Company, the Manhattan Transit, the New England Transportation Company (subsidiary of the New Haven), the Capitol Coach Lines, the Bee Line, the Public Service (Nyack) Rip Van Winkle Line, the Rockland Bus Lines and the Westwood Transportation Company. These lines act as "feeders" to each other and jointly share the terminal expenses.

The increase in the ticket sales during the first three months has already been mentioned, and a conception of the popularity of the terminal may be obtained from the fact that the average number of motor coach departures

Exterior of Pennsylvania Motor Coach Terminal

has increased from 70 per day during the first three months of operation to 210 per day at the present time. Comparative ticket sales are also indicative of the growing popularity that the terminal has enjoyed. In June, 1930, the sales were $70,178.80. In June, 1931, they were $73,400.59. The peak month of the terminal's history was in August, 1931, when the ticket sales amounted to $120,000. The average number of passenger tickets sold has increased from 600 daily to a total of 1,600, during a two-year period.

Concessions in active operation in the terminal at the present time include a parking space with a capacity of 65 automobiles, which produces a monthly revenue of $750, and a baggage and check room operated by the Union News Company in conjunction with the newspaper, magazine and cigar stands. This same company also operates a lunch room and soda fountain located on the 34th street side of the terminal building.

Terminal Expenses

The problem of just allocation of terminal expenses among the several lines that are using the same property has often proved a stumbling block to the satisfaction of the joint tenants in a terminal of this character. The Pennsylvania Motor Coach Terminal, however, has devised a system for equitable expense distribution which has proven eminently satisfactory to the dozen and more lines which make use of its facilities. Local transportation lines, which do not avail themselves of the agents and ticket-selling facilities, pay a flat departure rate varying from 50 cents to $1.50 per coach. Long-haul lines, for whom tickets are sold, pay their share of the terminal expenses on a commission basis.

The terminal employs two starters, working in shifts from 7 a.m. to 4 p.m. and from 4 p.m. to 1 a.m., to announce the arrival and departure of coaches through a loud speaker system which has been installed in the terminal. These men keep the loading lines clear for coaches entering and departing and assist in the efficient handling of the crowds. The three loading runways are equipped with platforms which eliminate delay in dispatching the coaches and make for flexibility in serving peak crowds. The two shifts are alternated every two weeks, each man having one day off during this period and the spare ticket agent acting as substitute for the dispatcher during these two days and also during the lunch periods.

Six ticket sellers are employed at the terminal, working in shifts which insure three men being on duty in the middle of the day, when travel is at the maximum. These shifts are divided as follows: 12 o'clock midnight to 8 a.m.; 7 a.m. to 4 p.m.; 8 a.m. to 5 p.m.; 11 a.m. to 8 p.m.; 3 p.m. to 12 o'clock midnight. Each ticket seller has one day off a week, the extra agent taking his position during the vacant shift each day.

Passengers Boarding Coaches from Island Platforms

Telephone Operators Make Reservations

Telephone operators are on duty 24 hours a day and answer all telephone requests for rates, routings, reservations, arrival and departure times, and the like. Duplicate sets of the tariffs of all companies using the terminal, and of other major connecting lines, are available in the switchboard room in order that the operator may have instantly available the latest rate and schedule information. Approximately 500 telephone requests for rates and routing are received daily, as well as an even greater number of desk and personal inquiries. When the operators are over-burdened with calls during rush hours, telephone calls are answered by the ticket sellers, direct wires being connected at each window.

During the months of June, July, August and September, a separate information desk is placed in the waiting room, affording additional service for travel information to interstate patrons. All-expense tours as well as straight transportation are sold at the terminal, and plans are being formulated to add steamship information to the terminal's services next year.

Ticket Selling Methods

Each ticket seller is directly responsible for the tickets and cash which he handles, being supplied with a key for his individual ticket and cash drawers. The ticket stock of each individual is arranged in alternating rows in the ticket drawers, the lowest priced tickets being placed on the left-hand side for convenience and ready accessibility.

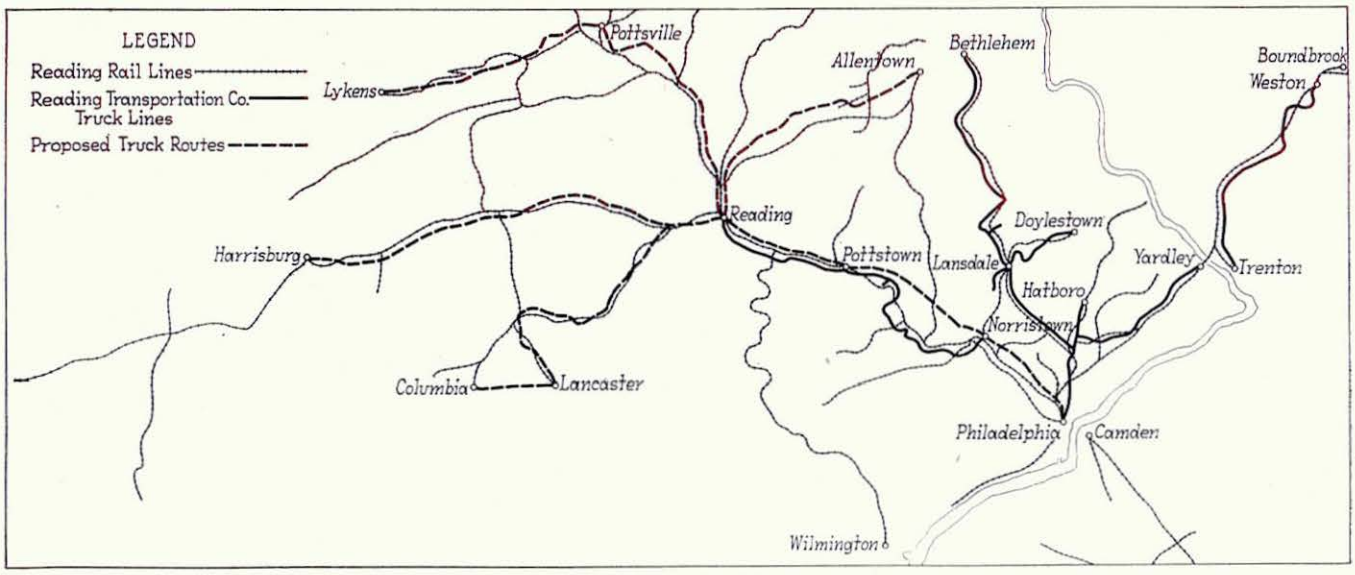
At the end of their shifts, sellers make up a summary sheet of the sales which they have made, and this in turn is given to the cashier, together with the cash received. These forms are then carefully checked to see that the correct rate of fare has been charged in each case. The ticket-cashier looks after the routine business in supplying ticket stocks to the sellers, depositing money, checking the rate entries of the sellers, and sending the forms to the auditing department of the terminal.

Ticket sales are made on the reservation basis, each seller marking down the number of the ticket sold for each seat in the coach, a special sheet for this purpose being made up for each coach leaving the terminal, and these sheets are carefully watched during the hour preceding the departure time in order that extra sections may be obtained from the operating companies if the volume of traffic warrants. In no event are tickets sold unless reservations are available or extra coaches for duplicating the schedule can be secured.

Traffic Stimulation

To develop traffic and solicit patronage, newspaper advertising is used in five or six of the important city daily papers. This advertising is arranged on an alternating basis, the copy appearing twice a week in some daily papers, once a week in others. Each operating company using the terminal pays a proportionate share of the cost of this advertising, according to the amount of space used.

The Pennsylvania Motor Coach Terminal, like many other major terminal developments, is evidence of the fact that both long distance and urban bus lines may have no apprehension of improved terminals as simply an added expense, but may look forward to an increase in traffic and revenue through providing adequate and suitable terminal facilities.



Reading Railway Lines, and Truck Routes Operating and Proposed

Reading Proposes New Truck Routes

Plans common carrier highway freight lines on 270 miles of routes—Also expanding train replacement truck service

THE Reading, after several years of successful operation of motor coaches through its motor transport subsidiary, the Reading Transportation Company, and after more than a year of operation of motor trucks in replacement of certain freight train service, is now proposing to operate several common carrier motor truck lines, parallel to its main lines and offering complete transportation service from store-door to store-door. Applications for permission to establish the common carrier truck service, supplementary to and co-ordinated with service on the railway, are now pending before the Pennsylvania Public Service Commission.

The Reading's first venture in highway transportation was undertaken several years ago, when it established motor coach routes in replacement of several unremunerative local passenger trains. Later it expanded its motor coach operations to include a number of intercity services supplementary to rather than in replacement of its main line passenger train service. The same sequence is now being maintained in connection with the truck operations of the Reading Transportation Company. Its first truck routes were train replacement routes, providing only station-to-station service. The truck lines it now proposes will render store-door service and will operate for the account of the transportation company as common carrier lines, the trucks co-ordinated with connecting freight service on the Reading but rendering a complete service between points served by the truck routes.

The accompanying map shows the extent of the existing train replacement truck routes, and also of the common carrier lines proposed. It will be noted that a substantial portion of the railway mileage of the Reading will be paralleled by Reading Transportation Company truck routes when the proposed lines are placed in service. At such time, the mileage of the lines covered by the transportation company's trucks will aggregate approximately 480, compared to 1,575 miles of railway lines operated by the Reading. The transportation company now operates four 5-ton trucks and two 7-ton trucks.

First Truck Operation

The Reading Transportation Company first engaged in truck operation on April 28, 1930, when it began the operation of two trucks in replacement of certain freight train service on the 55-mile line between Bridgeport, Pa., and Reading, via Pottstown. On this route, one truck leaves Bridgeport at 8 a. m., and reaches Pottstown, 33 miles, at 11:30 a.m., after making stops to pick up and deliver freight at seven intermediate points. It is turned at Pottstown, leaving that point at 12:30 p. m., and returns to Bridgeport, arriving there at 4 p.m. The other truck, operating on the other half of the line, leaves Reading at 9:30 a.m., and reaches Pottstown at 11.40 a.m., after making five intermediate stops. It is turned at Pottstown, leaving there at 1 p.m., and gets back to Reading at 3:10 p.m.

Second Line Recently Established

The second truck route, established by the transportation company on September 1, 1931, likewise requires two trucks. It covers, among other points, Jenkintown, Pa., Fern Rock, Hatboro and Yardley. New schedules in effect on this route call for the departure of a truck from Jenkintown at 8 a.m., and its arrival at Fern Rock, 5 miles at 8:29 a.m. The truck returns to Jenkintown immediately and thereafter pro-

ceeds to Hatboro, 14 miles, arriving at that point at 9:44 a.m. The following schedule calls for departure from Hatboro at 9:50 a.m., and arrival at Yardley, 31 miles, at 12:42 p.m. In the reverse direction, the schedule calls for departure from Yardley at 1 p.m., arrival at Hatboro at 3:54 p.m., departure from Hatboro at 4 p.m., and arrival at Jenkintown at 4:44 p.m. After this, the truck makes a round trip to Fern Rock, finally tying up at Jenkintown at 5:25 p.m. Two local stations are served between Jenkintown and Fern Rock, four between Jenkintown and Hatboro, and 14 between Hatboro and Yardley.

The train replacement routes to be established on December 1 cover Trenton, N. J., Weston, North Wales, Pa., Hellertown, Lansdale and Doylestown, as well as intermediate points. Three trucks will be required for this service. One truck will leave Lansdale at 7:30 a.m., arrive at Doylestown at 8:10 a.m., leave Doylestown at 8:30 a.m., and arrive at Glenside at 12:25 p.m., making 14 intermediate stops on the 30-mile run between Doylestown and Glenside. Returning, the schedule calls for departure from Glenside at 1 p.m., arrival at Doylestown at 3:20 p.m., departure from that point at 3:40 p.m., and arrival at Lansdale at 4:05 p.m. Another run is between Lansdale and Hellertown, a distance of 36 miles. Leaving Lansdale at 8 a.m., the truck arrives at Hellertown at 12:05 p.m., after making 10 intermediate stops. For the return trip, it leaves Hellertown at 12:45 p.m., and arrives at Lansdale at 4:25 p.m. The third new train replacement line to be established extends from Trenton to Weston, the schedule calling for departure from Trenton at 9 a.m., and arrival at Weston at 11:56 a.m., after 9 intermediate stops. Returning, the truck leaves Weston at 12 noon and reaches Trenton at 2:50 p.m.

Plan of Operation

Under the Reading plan of truck operation on its train replacement lines, freight is handled by rail between concentration points and points of distribution on night trains, and is delivered by truck to the outlying stations the following morning. The substitution operation is, of course, a simple station-to-station service, as distinguished from the plan for common carrier service, including store-door pick-up and delivery, which is contemplated in the applications now pending before the Pennsylvania commission.

The savings in operating expenses accomplished by these substitute operations approximate $65,000 a year. The original purpose of the substitution program was to effect this economy. Nevertheless, there is an additional advantage in that, due to the flexibility of the truck, a number of improvements in the service rendered have been made.

Proposed Common Carrier Routes

In its applications now pending, the transportation company proposes to establish 267 miles of common carrier truck lines. These will cover four routes in Pennsylvania: Philadelphia to Pottsville, 93 miles; Pottsville to Lykens, 40 miles; Harrisburg to Allentown, 89 miles; and Reading to Lancaster and Columbia, 45 miles. Although final plans for this service have not been completed, pending the action of the Pennsylvania commission on the applications, it is the general purpose to conduct a regular common carrier truck service, providing over-night schedules between all points in the territory served, and using trucks for the road haul movement as well as for the pick-up and delivery service at the smaller towns and cities enroute. In Philadelphia, and possibly some of the other larger cities, arrangements will be made, to the extent that may be expedient, with local city truckers to perform the pick-up and delivery service on shipments of less than a defined minimum weight. In such instances, where the pick-up and delivery service is performed by outside agencies, the transportation company's road trucks will take on and discharge the freight at concentration points.

It is planned, at the present time, to base the rates for this service generally on the railroad station-to-station rates, with an additional charge for the pick-up and delivery service, but the company may also quote certain commodity rates to meet special conditions as they arise. Although the company has not devised any plan for extensive co-ordinated service—part rail and part truck—in connection with the proposed common carrier truck operations, the feeling of the management is that such a program would be sound and that ultimately it will be adopted.

New Freight Carrier Built by Mt. Vernon Car Co.

THE Mt. Vernon Car Co., Mt. Vernon, Ill., in collaboration with the Haskelite Mfg. Company, Chicago, has designed and produced a unit freight carrier which embodies a number of distinctive features. Among these are side delivery to and from the freight car; air-operated wheel jacks, which make it possible for the container to be moved to any position on its own wheels without the use of lift trucks or overhead cranes; a substantial reduction in weight; reduction of impact to cargo while on the freight car, shocks being absorbed by the spring hold-down clamps; speed in handling, it being possible to transfer the truck to or from the flat car in three minutes; and low-slung weight, the unit carrier resting directly on the flat car floor, with friction contact.

Specifications

The unit freight carrier consists of Haskelite-Plywood panels assembled on a steel framework. The carriers are waterproof, and each side wall is made of a single continuous Haskelite panel. Panels ¾ in. in thickness are used for all walls and the roof, and the floor panel is 1¾ in. thick. Double doors give an opening 5 ft. wide.

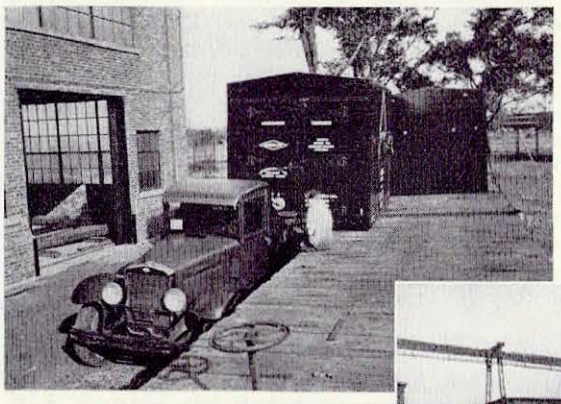
The two carriers thus far produced have capacities of 304 cu. ft. and 493 cu. ft., respectively. Specifications of the former are as follows: Length outside, 7 ft. 9 in.; length inside, 7 ft. 6 in.; width outside, 6 ft.; width inside, 5 ft. 7½ in.; height, bottom of jacks to eaves, 7 ft. 5-3/16 in.; height, bottom of jacks to roof ridge, 7 ft. 11-1/16 in.; height, inside from floor to eaves, 7 ft. 2-9/16 in.; door opening—height, 5 ft. 10-7/16 in.; door opening—width, 5 ft.; light weight, 1,760 lb.; load capacity, 10,000 lb. The 493 cu. ft.-unit carrier has the following specifications: Length outside, 9 ft. 6 in.; length inside, 9 ft. 1½ in.; width outside, 7 ft. 9 in.; width inside, 7 ft. 6 in.; height, bottom of jacks to eaves, 7 ft. 5-3/16 in.; height, bottom of jacks to roof ridge, 7 ft. 11-1/16 in.; height, inside from floor to eaves, 7 ft. 2-9/16 in.; doors opening—height, 5 ft. 10-7/16 in.; door opening—width, 5 ft.; light weight, 2,280 lb.; load capacity, 10,000 lb.

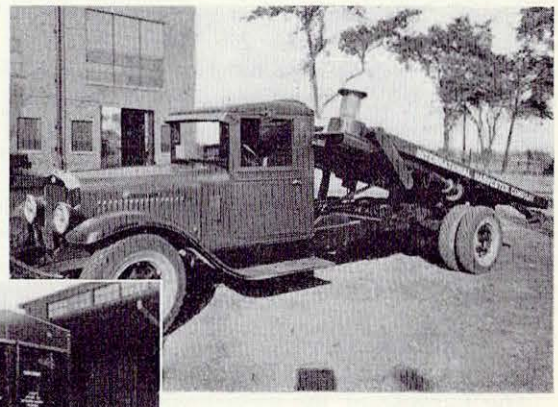
The freight carrier does not require a special flat car. To transfer the unit freight carrier to or from the flat car, the truck is run alongside or endwise of the flat car, it being unnecessary to place the truck or trailer at right angles to the car.

The freight carrier moves on its own wheels. These wheels are carried on air-operated jacks and can be raised or lowered in five seconds. Each unit carrier is equipped with eight wheels, one set permanently aligned at right angles to the other. These wheels are concealed in the four corners of the body when the unit is on the flat car or the truck. The wheels are lowered only when the carrier is to be moved from its resting place.

Each set of wheels is connected to a separately-operated piston and is completely independent of the other. From 70 to 80 lb. air pressure is sufficient to raise the loaded carrier. Spring hold-down clamps secure each freight carrier to the freight car. These clamps act as secondary draft gears in that they absorb a large part of the horizontal shocks or impacts. A standard 40-ft. steel underframe flat car will accommodate four of the larger carriers or six of the smaller ones.

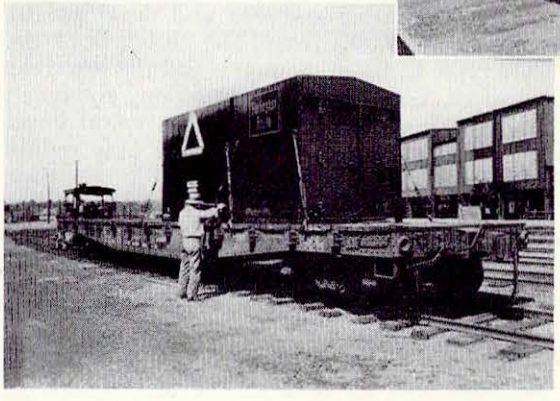
The unit freight carriers are handled on a new type of motor truck developed by the International Harvester Company, Chicago. This truck is equipped with a platform which can be elevated parallel to the ground or tilted. It is also equipped with a power-driven capstan used in moving the freight carriers off and on the flat car or the truck.

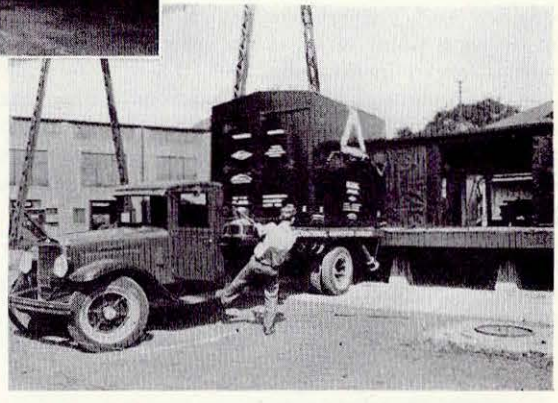




(Above) Rolling Carrier from Truck to Car—(Below) Carriers Are Held to Car by Spring Clamps

(Above) The Special International Truck—(Below) Rolling Carrier from Freight House to Motor Truck





(Above) Lifting Carrier by Compressed Air to Engage Rollers

Firestone Offers New Bus and Truck Battery

THE Firestone Tire & Rubber Co., Akron, Ohio, has developed a new battery for motor coaches and trucks which embodies a number of improvements. The battery has a one-piece case made of thick, hard rubber to withstand road shocks and vibrations. The handles and terminal connections are removable, and bolts and screws do not corrode. The terminal arrangement may be changed as desired.

Other features are the high, thick plates designed to provide ample capacity at all temperatures; selected cedar separators, combined with rubber sheets for double insulation; and special rubber bushing to prevent acid leaks at posts and to absorb shocks.

FREE TRIPS TO THE LEIPZIG (GERMANY) TRADE FAIR are offered this year to American business men, this unique plan of stimulating American trade being taken as evidence of Germany's confidence in the future, despite the present financial uncertainty. Expenses of the trip from the United States to Leipzig and return will be refunded on the basis of orders placed at the Fair, the refund to be made in cash at Leipzig during the Fair, which will be held from March 6 to 12, 1932. Information concerning the free trips to the Fair may be obtained by addressing the Leipzig Trade Fair, Inc., 10 East Fortieth street, New York City.

Motor Coach and Air Service Co-ordinated

PROVISIONS for co-ordinating their motor coach and airplane schedules, and for the sale of both bus and plane tickets at agencies of the air line and of the motor coach system, have been made by the Greyhound Lines and Transcontinental & Western Air, Inc., in both of which companies the Pennsylvania is interested. The co-ordinated bus and plane service was inaugurated on October 29. It is operating between New York and the Pacific Coast, and service by bus and plane will be available to all intermediate points along the air route, which is paralleled by the Greyhound Lines, as well as to those within a radius of 200 miles on either side. The division points for the transfer of passengers from bus to plane, or vice versa, are New York; Philadelphia, Pa., Harrisburg, Pittsburgh; Columbus, Ohio; Ft. Wayne, Ind., Indianapolis; Chicago; St. Louis, Mo., Kansas City, Springfield; Wichita, Kan.; Tulsa, Okla., Oklahoma City; Amarillo, Tex.; Albuquerque, N. M.; Winslow, Ariz.; Los Angeles, Cal., and San Francisco.

The purpose of the co-ordinated service is to make the advantages of air travel readily available to travelers living at some distance from the relatively few stops of the air line. The connections with the Greyhound Lines will enable people living in cities other than those in which airplane stops are made to use the frequent bus service to the nearest airport city, and also to use bus service to their final destination, if it happens to be off the air line route. Transportation between Greyhound stations and Transcontinental & Western Air terminals in division point cities is provided either in special airport buses or in taxicabs.

All Greyhound Lines bus stations within easy access of these division points have been made agents of the air line, and all ticket agencies of the Transcontinental & Western Air have been equipped to sell bus transportation.

Arrangements are being made to provide for a package express service over this combination bus-air system. Shippers at points off the air line will be able to consign air express packages to the local Greyhound bus depot for shipment. The packages will be carried by bus to the nearest air line division point and transferred immediately to the plane. Final delivery of the package will also be made by bus, if this is necessary.

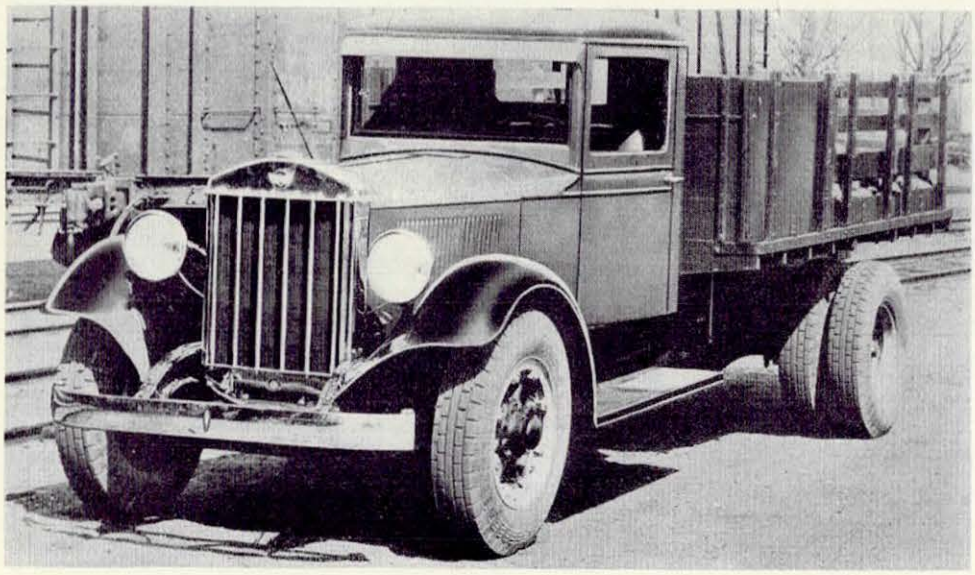
Reo 4-Ton Truck Placed on Market

A NEW heavy-duty six-cylinder four-ton truck is now being produced by the Reo Motor Car Company, Lansing, Mich. With a gross rated capacity of 20,000 lb., and a net capacity of 13,800 lb., including body, cab and load, this truck is a substantially larger unit than Reo has ever before manufactured.

The four-ton "Speedwagons" are offered in three standard wheelbases, 150 in., 170 in., and 190 in. The side channels of the frame are 10 in. deep and ¼ in. thick, with a constant flange width of 3 in. The front springs are 44 in. by 3 in., and the rear springs are 56 in. by 3½ in., the latter being fitted with helper springs.

The six-cylinder engine has a chrome nickel alloy iron cylinder block, cast integral with the ribbed crankcase. The seven-bearing crankshaft has journals 3 in. in diameter, turning in babbitt-lined bronze bearings. Force feed lubrication is provided to all crankshaft and camshaft main bearings, drilled passages through the crankshaft leading to the crankpins and connecting rod lower bearings, and gun-drilled connecting rods to conduct oil to the hollow piston pins. With a bore and stroke of 4⅛ in. and 4¾ in., respectively, and a displacement of 381 cu. in., the six-cylinder engine has an S. A. E. horsepower rating and 40.8 and develops 101 brake horsepower at 2,600 r.p.m. The clutch is of the twin dry plate type, 11 in. in diameter, and the low gear of the four-speed heavy-duty transmission, combined with the 6.375 to 1 standard ratio of the spiral bevel full-floating rear axle, gives an overall low gear reduction of 41.58 to 1.

Other features of this truck are the cam and lever steering gear, and enclosed hydraulic brakes with 390 sq. in. of braking surface, supplemented by vacuum booster equipment. Among the body types furnished are high and low side platform bodies, with or without ridge poles, and van bodies for truck or trailer mounting.



The Reo 4-Ton Truck Has a 6-Cylinder Engine which Develops 101 Horsepower

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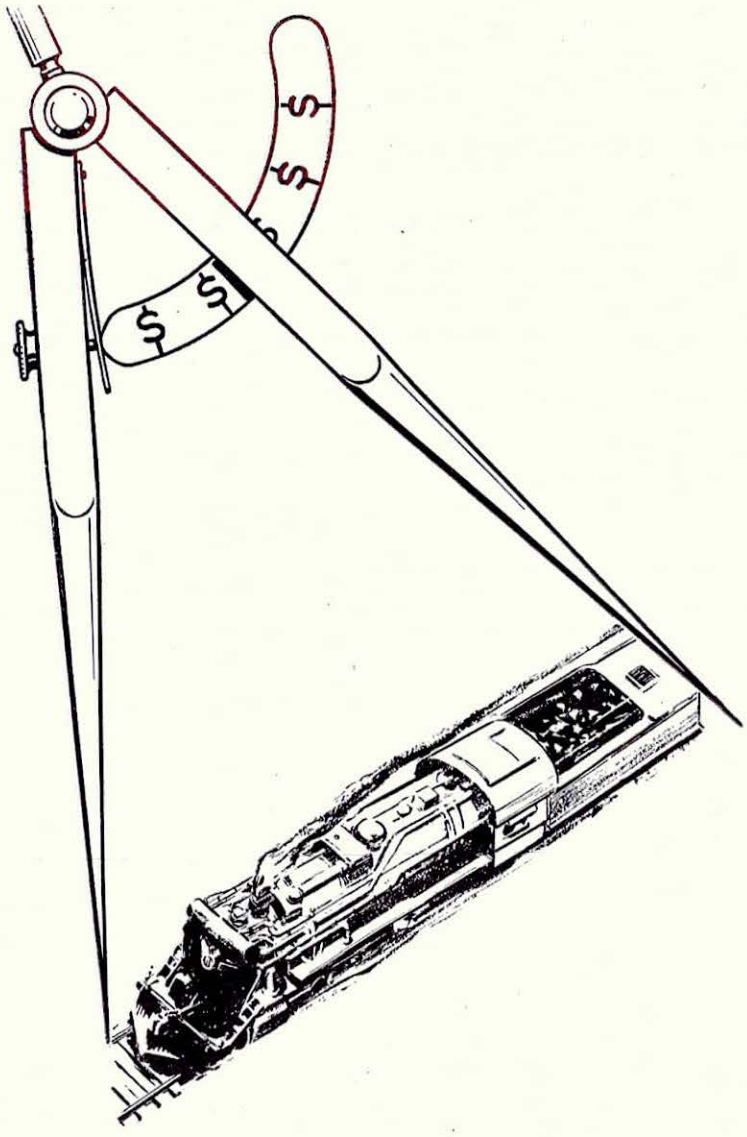

HOW
DO YOUR LOCOMOTIVES
Measure Up?

The railroad that congratulates itself on possessing "serviceable" locomotives is thinking in terms of the past.

The older locomotives may be in good mechanical condition. But if they fail to measure up to the performance of the modern Super-Power Locomotive they are money wasters, exacting a continuing excess charge on the production of transportation—**they are obsolete.**

LIMA LOCOMOTIVE WORKS INCORPORATED

LIMA LOCOMOTIVE WORKS, Incorporated • • LIMA • OHIO

Odds and Ends . . .

Another Old Waybill

The Boston & Maine Employees Magazine prints a letter from one of its employees at Bemis, Mass., who is in possession of a waybill dated January 5, 1848.

Many Happy Returns

Two of America's most famous trains have celebrated advanced birthdays recently. One is the Pennsylvania Limited, said to be the first limited passenger train ever put in service in this country, which is now 50 years old, and the other is the Empire State Express of the New York Central, which made its first run from New York to Buffalo 40 years ago.

Customer Worth Having

The Lackawanna has one passenger at least whom it has been successful in retaining in spite of all competition. He is Addison H. Day, who is now in his 63rd year as a regular commuter on the Lackawanna between Chatham, N. J., and New York. When Mr. Day started commuting, there was no such thing as a commuter train. The journey was then made from Chatham by stage to the Oranges, and thence by mail train to New York.

Sharpshooter

The American revolver championship, we are informed, has just been won by Constable R. G. Pickrell of the Canadian National Railways Investigation Department at Winnipeg, Man. With a score of 470 out of a possible 500, Constable Pickrell defeated the leading crack shops of North America. He was second in the event last year and has been among the first at the Camp Perry, Ohio, competitions for the past five years. Pickrell also holds the International Pistol Championship and the Canadian Pistol, Revolver and Rapid Fire Championships.

A Norfolk & Western "Industry"

What is said to be the only college in the United States with a trunk line railway running through its campus is Emory and Henry College at Emory, Va. The Norfolk & Western right-of-way divides two sections of the campus and parallels the northern boundary of another section for a distance of about one-half mile. The station at Emory, on the railroad's Bristol line, is situated a few yards east of the main entrance to the college. Seventy-five years ago the institution gave the railroad a stretch of land 80 ft. wide through the college campus.

Models Exhibited

One of the features of the recent annual dinner of the Railway Business Association at Chicago was the exhibit of 18 hand-carved locomotives depicting the "evolution of the iron-horse," which were on display in the assembly room of the Hotel Stevens. This exhibition will form one of the main attractions in the Transportation Building of the Century of Progress Exposition, to be held in Chicago in 1933. The models are made of ebony, ivory, walnut and mother-of-pearl and are exact reproductions, made from blueprints, of the original locomotives. The models are the work of Ernest Warther, of Dover, Ohio.

A Railway to be Given Away

Toy railways are common gifts at Christmas, but the Bavarian State (Germany) has gone one better by offering a railway line 15 miles long, complete with stations and rolling stock and in full running order, to anyone willing to take it over. Not merely is it a free gift, but the state will also pay $2000 yearly to the person who accepts it. It is the last Bavarian State Railway and runs through a most picturesque district near the Austrian frontier, from Ruhpolding to Reit. Hitherto it has been run by the Forestry Administration, which could not make it pay, but the state does not wish it to be closed down, as it is largely used by summer holiday makers and winter sports devotees. From the Railway Gazette (London).

Radio Audience Hears Willard's Life Story

The life story of Daniel Willard, president of the Baltimore & Ohio, was told by Frazier Hunt over the National Broadcasting Company's network on November 10. This was the sixth of a series of talks on great personalities, sponsored by a life insurance company.

Southern's Museum Park

The history of railroad development in general and of signal protection progress on the Southern Railway in particular, is presented in visual form in a museum park opposite the Southern passenger station at Lexington, Ky., where a collection of apparatus of old types, formerly used in signal service on the railroad, is on display, says the Southern News Bulletin. The Museum Park had its genesis in the order of Vice-President Henry W. Miller for the preservation of one of each of the several types of signals that had been in service on the Cincinnati, New Orleans & Texas Pacific and the Alabama Great Southern, when these were replaced by modern signals in 1926. After the signal apparatus had been installed, General Manager R. E. Simpson decided to enlarge the scope of the museum to include a roadway and rolling stock exhibit and a number of interesting relics.

Ten signals, arranged in a line running north and south, occupy the most prominent position in the museum. In the foreground are reproductions of two sections of track, one with 50-lb. rail on untreated ties without ballast and an old-style two-way stub switch, the other a stretch of track laid with 130-lb. rail and ballasted to present day standards with a switch of the type now in use.

Tourist Third in Pullmans

A notable decision, one which not only acknowledges the economic stress of the time but serves as tacit admission of the existence of a traditional honor, has recently been made by the Pullman Company. It has, on certain lines, reduced the tariff on upper berths to one-half the fare charged for lowers, at once making a concession to hard times and to that body of the traveling public which has always regarded the upper berth as a man trap. If, like Hamlet, you "do not set your life at a pin's fee," you may now travel topside for a mere pittance.

Ever since the time when George Mortimer Pullman inaugurated service in his new "palace car" named Pioneer, many years ago, the Pullman Company has adopted the attitude that uppers were only slightly less desirable than lowers. Its porters pushed you with fatuous cheerfulness up green plush ladders into the unknown horrors of hidden regions; it displayed pleasing lithographs of travelers enjoying sweet slumbers unannoyed in uppers. Now hard times have brought it, quite figuratively, to its knees. The market on uppers is bearish.

And yet the Pullman car as a whole is an American legend. Its aisles, that are wildernesses of bulging curtains, waving trouser legs and depressing glimpses of human anatomy in the imperfection of matutinal disarray, are a part of every man's experience. Its washroom, combless, brushless—that inevitable scene and setting for wicked anecdotes where the genus traveling salesman tonsors himself, anoints his physiognomy with unguents and adjusts his galluses—is an institution of sacred and immutable permanence, an affliction to be borne with the pride in its native quality, an esthetic torture at once loathed and cherished.—Editorial in the New York Herald-Tribune.

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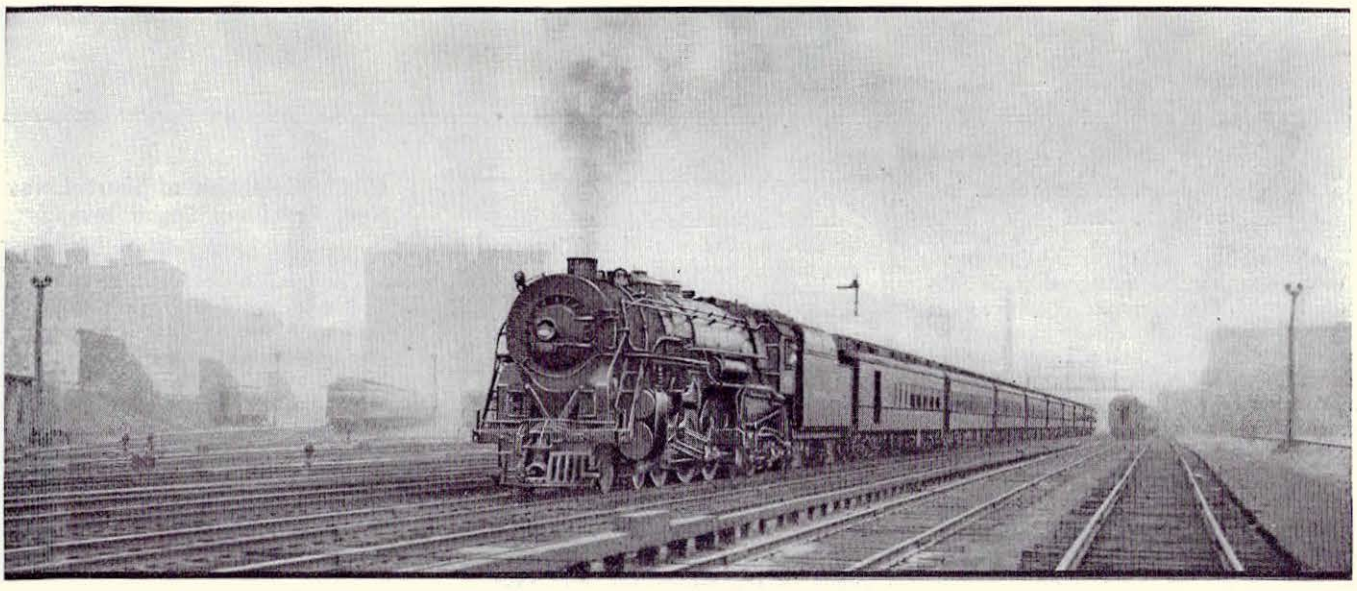
• The BOOSTER Maintains Speed



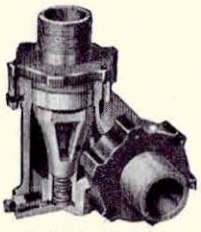
For The B & A In The Berkshires

- Eight B & A trains, run in thirteen sections, are hauled by Booster-equipped locomotives including

The Twentieth Century Limited
Nos. 25 and 26
New England Wolverine
Nos. 8 and 13
Southwestern Limited
No. 11
North Shore Limited
Nos. 39 and 40
Lake Shore Limited
No. 22
Chicago Special
No. 10
Western Express
Nos. 49 and 46
Buffalo Express
Nos. 42 and 37

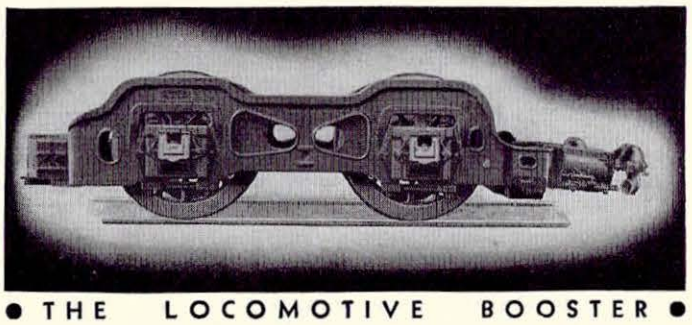
IN passenger service on the Boston & Albany, Boosters serve in a dual capacity. Between Boston and Springfield, the Booster smooths out the starting of eight well-known through trains. Their extra power eliminates the need of taking slack. It also speeds up acceleration to road speeds, saving time on every run.

In crossing the Berkshires, the Booster is available for an additional duty. When grades become steep and speeds drop, the Booster is cut in, its extra power maintaining speed that could otherwise be obtained only by the use of a more powerful locomotive. Regardless of the topography of the territory your road traverses, there is need for economical power such as the Booster supplies.



THE FRANKLIN SLEEVE JOINT

Assures a full area opening and unrestricted passage for air, steam and oil.



• THE LOCOMOTIVE BOOSTER •

FRANKLIN RAILWAY SUPPLY CO., INC.

NEW YORK CHICAGO SAN FRANCISCO ST. LOUIS MONTREAL

NEWS

Grain Rate Reduction Attacked in Supreme Court

Asserting that the Interstate Commerce Commission has misconstrued both Section 15a of the interstate commerce act and the Hoch-Smith resolution the western railroads have filed in the Supreme Court of the United States their brief in support of their appeal from the federal district court at Chicago which had sustained the commission's order prescribing a general downward revision of western grain rates, which the carriers estimated at $20,000,000 a year. The commission's report discloses, the brief says, that in making its order it proceeded on the assumption that it was required by the Hoch-Smith resolution to reduce rates on agricultural products, although the grain rates involved had twice been approved by the commission and some of them had been fixed by it while the grain case was pending. The brief also says that the commission erroneously reduced the general level of the grain rates at a time when the rate of return of the western roads was below the statutory requirement and without any finding that the reduced rates would increase revenues by stimulating traffic. The carriers contend that the action of the commission in overruling their petitions for rehearing and in failing to discharge the affirmative duty imposed by Section 15a to protect the carriers' revenues is so arbitrary and unreasonable as to render its order void and as to entitle them to enjoin its enforcement.

I. C. C. Active in Recapture Proceedings

A resumption of increased activity in the administration of the recapture provisions in Section 15a of the interstate commerce act has been noticeable of late on the part of the Interstate Commerce Commission's organization. Five or six hearings in recapture cases, mostly involving short lines, are being held by commission examiners daily and many additional tentative recapture reports have been issued. On November 24 the commission also issued another final recapture order, making final in the absence of a protest the order which had accompanied its report of March 20, directing the estate of R. J. Darnell, lessee of the Batesville Southwestern, to pay $18,969 as the recapturable excess for the year 1921 of this 17-mile line in Mississippi, which had reported deficits for the other years from 1920 to 1928 and which the commission had authorized to be abandoned by a certificate issued in February of this year.

If the states should step in, and by limiting the size of auto trucks and freight burdens to such as the highways are actually adapted to the super-burden that is now falling on them, would be forced back to the railroads where it belongs. Then the railroads, as a means of allaying the protests that would go up, over the greater time and inconvenience involved in shipping by rail, would be forced to find quicker and more convenient ways of handling shipments. Meanwhile the light trucks and passenger vehicles for which the highways were intended would experience a vast relief in using them, and everybody would be happy.

— From an Editorial in the Quincy (Mass.) Patriot Ledger.

Expenditures for Grade Separation Protested by Missouri Roads

Representatives of railroads operating in Missouri appearing before the Missouri Highway Commission at Jefferson City on November 10 to ask for relief from expenditures for grade crossing separation projects in that state. Such improvements, non-productive so far as the railroads are concerned, constitute a heavy burden, counsel for the roads pointed out. It was proposed by the roads that Missouri follow the example of other states that have approved plans for building viaducts and underpasses on a deferred payment plan for the railroads. Missouri's grade crossing separation program for 1932 has been reduced from 38 to 18 projects.

Court to Decide Right to Drill Oil and Gas Wells

The question of whether the Texas & Pacific has the legal right to drill oil and gas wells on its right of way in Texas or to lease the land for these purposes will be submitted to the Court of Civil Appeals in Austin on February 3. The company contends that it owns the right of way and, therefore, has the legal right to its exploitation for oil and gas. The state bases its opposition to the proposal on the contention that the railroad's right of way is only an easement for strictly transportation purposes. The Texas & Pacific traverses a number of counties in West Texas where oil and gas are being produced, and if the pending case is decided in its favor it will drill a number of wells. The decision will also affect similar operations by the Missouri Pacific in the east Texas fields.

I. C. C. Exemption of Short Lines from Per Diem Found Invalid

A provision in the Interstate Commerce Commission's order as to rules for car-hire settlement, effective October 1, 1930, which exempted short-line railroads to some extent from payment of per diem on railroad-owned freight cars, was found invalid in a decision rendered by the Supreme Court of the United States on November 23. On an appeal taken by the Chicago, Rock Island & Pacific et al, the court reversed the decree of the district court for the northern district of Illinois which had sustained the order of the commission in all respects. Justice Holmes and Brandeis joined in a dissenting opinion of Justice Stone. The commission's report in the case, following an investigation undertaken largely at the instigation of the short line association, was dated January 7, 1930, and it later issued an order, effective October 1, containing five numbered paragraphs which the roads were to observe in their rules for car-hire settlement. The railroads made no complaint as to two of these paragraphs but attacked paragraphs 2, 3 and 5 of the order. Paragraph 5, which the court held was confiscatory, provided that short lines outside switching districts interchanging freight with only one road subscribing to the per diem rules, in paying per diem should be allowed to deduct an average of two days free time per loaded freight car, and that no car hire need be paid on cars received for return loading with coal from coal mines customarily dependent on connecting carriers for car supply.

After holding that other provisions of the order did not transcend the limits of reasonable regulation the court said, in the majority opinion by Justice Sutherland, that the provision relieving one class of carriers was in flat opposition to the commission's finding, that all railroads are entitled to receive a definitely fixed sum per day for every car used by a foreign line and could not be permitted to stand. "Certainly a regulation permitting the free use of property in the face of an express finding that the owner is entitled to compensation for such use cannot be regarded otherwise than as arbitrary and unreasonable," the court said, adding: "If, as claimed, the earnings of the short lines are insufficient to enable them to make full payment of car hire costs, the commission may be able to afford a remedy by increasing the rates, or by a readjustment of the division of joint rates." Counsel for the railroads during the hearings before the commission had taken the position that the short lines were seeking an exemption from per diem in lieu of proper rates or divisions. The court also said:

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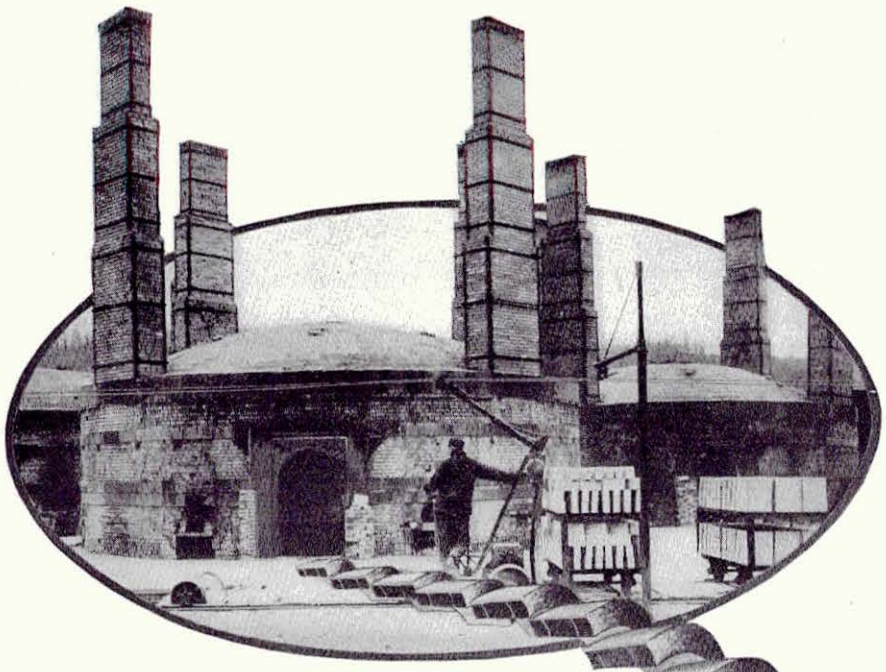


Arch Brick development has been carefully guided

"THAT will require a special pattern of Arch Brick." This answer is an easy way out whenever locomotive Arches present a problem. But think what every special shape means in adding to the Storekeeper's worries.

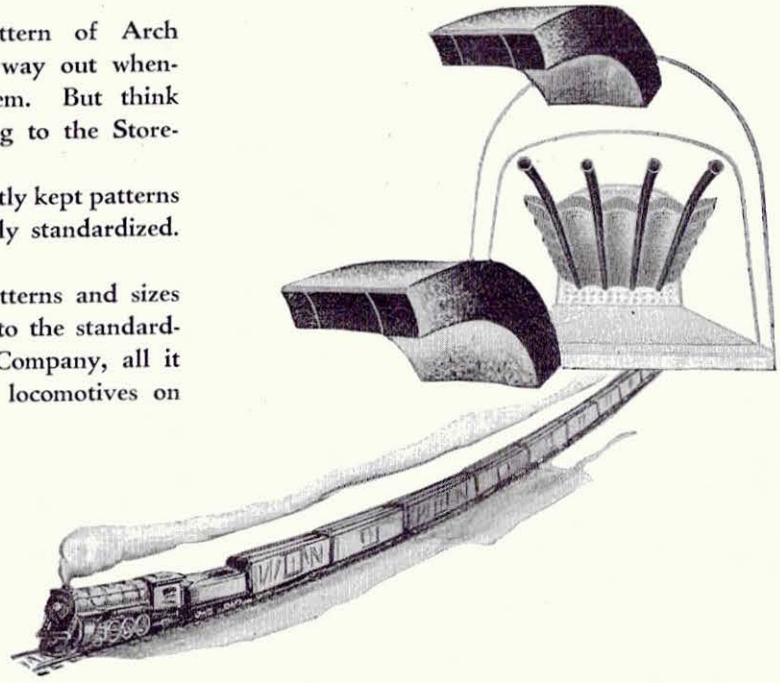
American Arch Company have consistently kept patterns to a minimum. Shapes have been carefully standardized.

What is the practical result?

One railroad was using 146 distinct patterns and sizes of Arch Brick on its lines. Now, thanks to the standardized Arch Brick of the American Arch Company, all it needs is 25 patterns to care for all the locomotives on the road.

Consider the resulting economy in inventory, in space, breakage and in time of handling.

Most Storekeepers are deeply appreciative of the constructive help constantly given them by American Arch Company.



HARBISON-WALKER REFRACTORIES CO.
Refractory Specialists

AMERICAN ARCH CO.
INCORPORATED
Locomotive Combustion Specialists

"The part of the order (paragraph (5)) now under consideration creates an exemption in favor of all short lines and against all connecting carriers, irrespective of varying circumstances, in the face of a general finding that all common carrier railroads are entitled to compensation in the form of daily rental for the use of cars when on foreign lines.

"The language of the finding could not be more comprehensive. If followed it necessarily compels payment of rental by the lines exempted as well as all other lines. It affords no justification for any exemption. We are not called upon to consider the evidence, since the Commission, upon the evidence, has made its findings.

"The vice of the situation is that the order of the Commission—that is to say, its judgment—does not conform to its conclusions upon the facts. In disapproving this paragraph we do not mean, for the present, to go beyond the precise case presented, or to pass upon the question of the authority of the Commission to make fair apportionment of car-hire costs, or in special cases to make adjustments and afford a proper measure of relief in the matter of payment of charges for the use of cars."

Richard Waterman Dies

Richard Waterman, formerly secretary of the railroad committee of the Chamber of Commerce of the United States, and for many years connected with the activities of its transportation department, died at his home in Washington, D. C., on November 16.

Whitestone Abandonment Brief Filed in Supreme Court

Alfred A. Gardner and Joseph F. Keany, counsel for the Long Island, have filed, in the Supreme court of the United States, a brief for the railroad in the litigation over the abandonment of its Whitestone branch. The brief contends that the Interstate Commerce Commission, in authorizing the abandonment, was fully justified and did not exceed its power.

Ohio Valley Board Meeting

The Ohio Valley Shippers' Advisory Board will hold its regular meeting at the Netherland-Plaza Hotel, Cincinnati, Ohio, on December 8. The principal address at the meeting will be made by Robert W. Nelson, vice-president of the Cincinnati Chamber of Commerce. A luncheon has been arranged by the Cincinnati Traffic Club and the Miami Valley Traffic Club, at which Charles Barham, vice-president of the Nashville, Chattanooga & St. Louis, will speak.

I.C.C. to Hear Argument on Pooling Plan

The petition of the Association of Railway Executives, presenting a proposal of a plan for pooling the increase in revenues to result from the rate increase conditionally offered the roads by the Interstate Commerce Commission, has been set for argument before the commission at Washington on November 28. The plan, as filed on November 19, is based on a loan of the proceeds to the weaker roads, rather than an outright distribution as contemplated by the commission. The petition asks for several modifications of the commission's report in Ex Parte No. 103.

Industrial Development on Boston & Maine

Construction aggregating nearly $2,000,000 on eight new industrial development projects in Greater Boston communities served by the Boston & Maine has been completed or contracted for within the past few days, according to an announcement by the railroad's industrial development department. These industries, each new to the community in which it has been established, employ or will employ about 750 persons.

Silk Rates To Be Reduced

In order to meet Panama Canal competition, which is causing much raw silk to be diverted from the railways to steamships, the railroads participating in the movement of silk from the Pacific Coast to New York are planning to reduce the rate across the continent from $9 per 100 lb. to $6. With the proposed rate, the water-rail rate from Yokohama to New York will be $12, or approximately the same as the all-water rate through the Panama canal.

Low Fares on Texas & Pacific

The Railroad Commission of Texas has granted the Texas & Pacific permission to place a passenger rate of 1¾ cents a mile in effect on December 1 between Texarkana and Fort Worth, 245 miles, and between Fort Worth and Big Spring, 267 miles. Several months ago, a two-cents-a-mile rate was put in effect on the two divisions, and, as a result, there was a considerable increase in traffic. The proposed rate will apply only to coach passengers. It will allow 100 lb. of baggage to be checked free.

Prize Livestock Killed on Missouri Pacific

Four men were killed and 20 injured when 22 cars of a 62-car train carrying livestock to the International Livestock Exposition in Chicago were derailed on the Missouri Pacific near Lexington, Mo., on November 22. The train had been loaded at Kansas City, at the close of the American Royal Livestock and Horse Show. Nine prize horses were killed and 24 injured. The train was traveling at about 30 miles an hour when it broke a rail which had been weakened by a transverse fissure.

P. R. R. Prizes For New Ideas

The Pennsylvania, acting on the record of the six months ending with October, has given the usual semi-annual prizes for employees' suggestions, adopted by the company, proposing improvements in service, in accordance with the regulations of the "Bureau of New Ideas." The first prize, of $100, goes to an electrician; the second, $50, to a clerk, and the third, $25, to a conductor.

The bureau has now been in operation four years; and of the suggestions received thus far in 1931 nearly one-third have been adopted. In the four years about 2000 have been adopted.

The name of an employee making a proposal is treated as confidential and is not known even to the officers who consider the value of the idea.

Canada's Equipment Industry

Production from the railway rolling stock industry in Canada during 1930 was valued at $104,922,701, according to the Dominion Bureau of Statistics at Ottawa. This output was the second highest on record being only exceeded by the value of $126,487,037 for the previous year. Corresponding totals for other years were $73,422,057 in 1928, $74,466,912 in 1927, and $72,706,052 in 1926.

In 1930 there were 37 firms operating in this group of which 15 were located in Ontario, 10 in Quebec, 4 in Manitoba, 3 in Nova Scotia, 3 in Alberta, 1 in New Brunswick, and 1 in Prince Edward Island. These plants employed a working capital of $95,785,640, purchased materials for manufacturing and repairs worth $60,289,445, afforded work to an average of 25,952 people, and expended $37,625,050 for salaries and wages.

Products made during the year included 8,348 new cars valued at $34,533,255; 108 new locomotives at $6,772,938; car wheels worth $3,678,617; and brakes, brakebeams, brakeshoes, tires, piston rings, car springs and ends, and other car and locomotive parts. The cost value of repair work done in these shops on railway cars and locomotives amounted to $34,107,131.

During 1930 only 4 plants in Canada produced locomotives, 4 made steam railway passenger cars, 7 made steam railway freight cars, 4 made electric railway passenger cars, 11 made car wheels, and 2 made mining or narrow gage cars.

Chicago Hearing on Railroad Practices

The Chicago hearing on Ex Parte 104, Part 2, an Investigation of Railroad Practices Affecting Operating Revenues and Expenses, which the Interstate Commerce Commission opened in that city on November 10, ended on November 20 after the presentation of testimony by traffic and operating officers of railroads in the central and western territories. The testimony and cross-examination of witnesses during the 10-day session touched upon such practices as the division of rates whereby switching charges are prorated, appropriation of cars by shippers for intra-plant movements during free time without charge, the storage of coal in cars without demurrage, the pooling of switching service with industries as a means of economy, reciprocal switching, switching allowances and switching absorptions. Representatives of the following railroads testified: Chicago & North Western; Baltimore & Ohio Chicago Terminal; Baltimore & Ohio; Erie; Belt Railway of Chicago; Chicago, Rock Island & Pacific; Chicago & Eastern Illinois; Chicago & Illinois Midland; Chicago, Milwaukee, St. Paul & Pacific; Illinois Central; Atchison, Topeka & Santa Fe; Elgin, Joliet & Eastern; New York Central; Indiana Harbor Belt;

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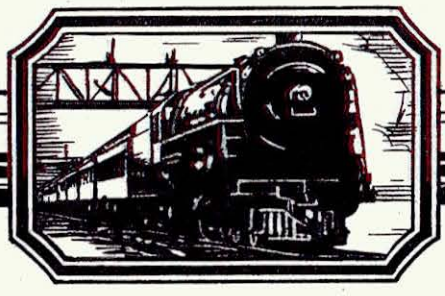

Alco Alco

TO ECONOMIZE— MODERNIZE

RIGHT NOW offers an excellent opportunity for railroad men in general to ask themselves a few questions—

We have a few in mind that we think quite pertinent—for instance—

As the railroad business gets more and more competitive, should not the item, gain in net revenue, become more and more important when making capital expenditures?

How much of the capital expenditures made by our railroads during the past five years has contributed toward a gain in net revenue?

Was the gain, if any, in each case, commensurate with the amount expended?

Of all the items bought by a railroad, are there many, if any, that offer greater opportunity for better service at lower costs than modern locomotives?

And right in line with this last question, is it not a fact that practically all railroads today are using the best locomotives they own?

Why?

When business picks up and some of the older freight engines, with their insufficient capacity for high speed, are sent out ahead of the present day modern freight engine, what is going to happen?

And will net earnings under such conditions pick up anywhere commensurate with the pick up in gross earnings?

And if not, why not?

We believe that in the answers to the above questions there is much food for thought.

American Locomotive Company
30 Church Street New York N.Y.

Alco Alco

Chicago Junction; Chicago, Burlington & Quincy; Chicago Great Western, and Peoria & Pekin Union.

Ontario Premier Promises Truck Regulation

Regulation of motor truck transportation was forecast last week in Toronto by Premier George S. Henry when 27 delegates of the affiliated railwaymen's organizations in Ontario and representing Shipment by Rail Associations in 15 municipalities waited on him today at Parliament buildings.

Stressing alleged unfair competition by trucks, the delegation asked that no buses or trucks be permitted where adequate railroad transportation already exists or where steam railways are willing to provide such facilities.

They asked that all buses and trucks be placed under control, administration and supervision of the railway and municipal board or a similar commission and be operated under conditions similar to that imposed on the railways, especially with regard to the fixing of rates and the elimination of destructive competition.

The delegation wanted all commercial vehicles using the highways for revenue purposes to be taxed on a basis commensurate with the use they make of the highways, with due regard to construction and maintenance.

It was requested that owners be required to furnish a guarantee of sufficient financial responsibility to assure payment of any claims for damages and that drivers be required to pass a qualifying physical examination and that excessive hours on duty be prevented by legislation.

"We are very anxious to cooperate with you and think that your ideas are to be commended," said Premier Henry at the conclusion of the interview. "We agree that the service provided by trucks and their operators should contribute to the service that is being given them through the medium of the highways.

"It should be possible," continued the Premier, "to work out a theory by which rates would be regulated in the same way as they are regulated for the railways by the railway board. It is not fair that the railway services should be supervised and then have those services undermined by jitney operation. I think the railways should be protected and that they should not be undermined by truck operators who do not know what the service costs them."

Electrification in the Pittsburgh District

The possibility of electrifying railroads in the Pittsburgh, Pa., district, was presented before the Railway Club of Pittsburgh on November 28, by Frank R. Phillips, president, Philadelphia Company. In introducing his subject, Mr. Phillips frankly stated that he hoped when electrification did come, the power would be supplied by the Duquesne Light Company. He also indicated, however, he would not recommend electrification unless it could be proved economical for the railroads and beneficial to the community as a whole.

The fundamental conditions which justify, or in some cases necessitate electrification, he said, may be classed as civic or economic. The economic reasons were given as the most important and in most cases the controlling factors, these being divisible into three classes; first, where electrification permits the accomplishment of some necessary improvement for a smaller investment than any other scheme; second, where it results in operating economies that more than off-set the fixed charges on the money expended; and third, where it increases revenue to an extent sufficiently to justify the investment.

Mr. Phillips spoke specifically of the possibilities of electrifying railroads within a radius of 30 to 40 miles around Pittsburgh. In this connection he said his remarks must not be interpreted as an attempt to analyze the problem of any particular railroad, or as a criticism of any policies adopted or likely to be adopted by any of the various roads serving this district. Concerning the Pittsburgh district electrification, he said in part:

"The first aspect of the problem is the question of terminal congestion and the possibility of its relief by the expansion of present facilities. In this respect, conditions in the Pittsburgh territory seem peculiarly favorable to electrification. Although every railroad entering Pittsburgh can in all probability expand its facilities to a small extent by the installation of additional tracks, and at the same time keep the investment within reason, the location of the terminals, together with the peculiar topographical conditions, make it seem reasonable to expect that the handling of additional traffic through expansion has very definite economic limits. In other words, it would appear that the extremely high price of real estate, combined with the limitations imposed by the hills, valleys and rivers, make extensive expansion out of the question.

"Both the Baltimore & Ohio and the Pittsburgh & Lake Erie terminals are hemmed in on one side by city streets, which in all probability cannot be relocated, and on the other side by the Monongahela river. Although in each instance there is some room left for physical expansion of facilities, it seems clear that with any substantial increase in traffic some other means will have to be found to increase terminal capacity. In the case of the Pennsylvania Railroad, it is, of course, possible to expand in one direction, as they are now doing, but here it can only be carried so far, and in the other direction the contour of the land is such that no more space for tracks is available.

"The same argument also applies in the case of the main lines leading out of Pittsburgh. Most of them follow either the river or the valleys between the hills, which inherently impose many difficulties in the way of constructing additional tracks. Consequently, if at any time the freight and passenger traffic in this district reaches the capacity of the main routes, it is very probable that the most economical way of handling the growing needs of the community will be to electrify.

"The heavy grades on those roads whose routes do not follow the rivers, but more or less run at right angles to them, also present situations [heavy grades] usually favorable to electrification ..... Concerning suburban traffic, it again appears that electrification affords many possibilities in and around Pittsburgh. It does not seem that suburban development in this territory has in any way reached the magnitude that might be expected...."

Dominion Commission Chairman

Judge Charles F. Fullerton, of Winnipeg, Man., the new chairman of the Dominion Railway Board at Ottawa, Ont., was born in Amherst, N. S., 61 years ago. He was educated at Dalhousie University, Halifax, N. S., and practised law in Amherst and in Cape Breton Island. In 1906, he went to western Canada, where he practised law in Winnipeg and was active in politics for a considerable time,

Charles F. Fullerton

his party being the Conservative. In 1917, he was named Chief Justice of the Appeal Court of Manitoba.

When Mr. Fullerton entered Dalhousie University in Halifax, the present Prime Minister of Canada, the Rt. Hon. R. B. Bennett, who appointed him to the Railway Board, was a senior in that college. Mr. Fullerton was obliged to interrupt his college course because of an affliction of his eyes. Joining a lumber company in Amherst as a clerk, he later rose to become its manager, prior to his removal to the West to engage in the practice of law.

Asks Trade to Stop Gift Giving

A polite but pointed letter has been issued to principal suppliers of materials purchased by the Canadian National in which the vice-president in charge of purchases, R. C. Vaughan, has called attention to the practice of giving gifts to railway officers at Christmas and has requested the discontinuance of the practice as inconsistent in the present depressed condition of business. In this letter Mr. Vaughan says in part:

"It has been the practice of some suppliers of railroad materials to make gifts to buyers, particularly at Christmas time.

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Every man to his own taste

The Chinese Mandarin may be content with his own picturesque method of transportation, but the modern world prefers to travel swiftly, smoothly and comfortably on steel rails, and Gary Wrought Steel Wheels.

U S STEEL

Illinois Steel Company

Subsidiary of United States Steel Corporation

General Offices: 208 South La Salle Street, Chicago

The spirit of good will which has accompanied these remembrances has been appreciated, and we hesitate to say anything in the matter which would give a wrong impression to our friends.

"We realize that heretofore these gifts have been accompanied entirely by the best of good will and personal regard; but we believe it to be to the interest of all concerned at the present time to have the practice of making gifts to purchasers of railroad material discontinued. These are times when we feel that costs of manufacture, and selling prices should be kept down to the minimum. We realize that the price of these gifts must eventually go into the cost of production, and therefore passed along to the purchaser for payment.

"We sincerely hope that our remarks in this matter will not be misconstrued. We appreciate to the fullest extent the good will of those with whom we do business, whether it be in the purchase of material from them, or in the sale of our commodity to them, which is transportation."

Canadian Wage Board Hearings

A lively exchange of charges and denials marked last week's hearings in Montreal by the board of conciliation on the application of the Canadian railways for a 10 per cent reduction in the wages of train and engine men of whom there are over 27,000, according to the present payroll. The board consists of James M. Macdonnell, of Toronto, chairman, Dr. J. C. Hemmeon, of McGill University, Montreal, for the employees, and Isaac Pitblado, noted Winnipeg lawyer, for the railways. George Hodge, manager of the department of personnel for the Canadian Pacific, presented the case for the railways last week, and Hon. James Murdock, former Minister of Labor at Ottawa, now a member of the Canadian Senate, and an officer of one of the unions, argued for the men. George Hodge for the railways, contended that in the present critical condition of the roads, it was essential that operating costs be reduced and that the proposed wage reduction would be offset by the lowered cost of living. Senator Murdock enlivened the proceedings by charging that the application for a wage cut was instigated by financial interests in Montreal and not by the railway managements. To this the railways gave an emphatic denial.

Expressing regret that, in respect to the classes of employees concerned, for the first time in the history of both railways they had found themselves compelled to invoke the application of the Industrial Disputes Investigation Act in order to make it possible to have applied a change in the basis of compensations, the railways were of the opinion that this change is absolutely necessary not alone in order to meet the present difficulties, but to assist in preserving their financial stability to the greatest extent possible, looking to the future in what they believed to be the best interests of Canada, the railways, and of their employees.

"There never was a more reasonable or fairer proposition submitted by the railways to their employees than that contained in the letter of September 15, 1931," said the railways representative to the Board in filing with them the correspondence of that date proposing the decrease under discussion yesterday. And it was pointed out, "the companies suggested that, rather than that they should reduce the existing basic rates of pay, the employees should accept a reduction of ten per cent in their compensation for a temporary period, but that, failing an adjustment on this basis, the existing agreements should be revised to provide for a like reduction in the rates of pay specified therein." Refusal of this had made the railways apply for the establishment of a board to secure revisions of their agreements with the employees, it was stated.

The minimum decrease which can reasonably be asked is ten per cent, Mr. Hodge stated, and a bigger reduction might, with justification be asked, he intimated.

If changes in the cost of living and in the earnings of the railways is admittedly a basis for increase in rates of pay, then the same argument should apply when the reverse conditions obtain, contended the railways, and gave material facts to show that this reversal of conditions existed. The railways had in fact withheld their action in the hope that improvement in economic conditions might have enabled them to maintain the existing status, it was argued.

Why such a hope had to be abandoned was revealed by the railways' presentation of their case, in which financial operations for each year from 1926 to 1930 were given, and for the first nine months of 1931, in comparison with 1930. These figures indicated the seriousness of the decline in revenue for both railways, both gross and net, Mr. Hodge claimed.

Graphs submitted were claimed to show that, notwithstanding the most unfortunate condition in which the railways find themselves financially, the employees, even with a ten per cent decrease in wages, would be in a better position in respect to purchasing power of their rates of pay under their agreements than at the time changes in rates of pay were agreed upon in 1920, and subsequently.

"These men are not willing to accept the levy of 10 per cent of their wages, or any per cent of their wages, for the purpose of solving the existing inability of the railways to pay dividends, or for other purposes," declared the Hon. James Murdock, when presenting the case of the employees. He said that the plea of the railways that the cost of living had been lowered considerably did not properly apply in this case as the wages had been lower than they should have been, and that hence a drop in the cost of living could not, on the broad justice of the case, affect the wages.

Prominence was given to the matter of the comparative wages of the railwaymen in the United States and Canada, and, in the words of the employees "the inconsistency of the proposals made by the railways in connection with the dispute will be apparent when it is shown that today Canadians employed on the 230 miles between Windsor and Niagara Falls on the Michigan Central, who are paid the American rates, are receiving approximately 6 per cent more than their fellows employed on the C.N.R. or the C.P.R."

Sparks flew at times during the investigation on Thursday. From the outset it was apparent that the statement presented to the Board of Conciliation and Investigation by the representatives of the five organizations of employees was considered provocative, and a reference made to influences outside the railway companies, as responsible for the application for reduction, was at once challenged by the railways, through George Hodge, who read a statement signed by Sir Henry Thornton, chairman and president of the Canadian National, and E. W. Beatty, chairman and president of the Canadian Pacific. The employees statement mentioned "St. James street (i.e. Montreal's financial district) influence."

Foreign

G.W.R. Appoints Men with American Experience to Publicity Posts

K. W. C. Grand has been appointed commercial advertising and publicity agent of the Great Western Railway (Great Britain), succeeding W. H. Fraser, who is retiring. G. E. Orton has been appointed assistant commercial advertising and publicity agent, both appointments becoming effective on January 1. Mr. Orton has for the past two years been general agent of the Great Western for the United States and Canada, with offices at New York, and Mr. Grand was his predecessor in that position. Mr. Fraser has for a considerable time been a regular contributor to the *Railway Age* of articles telling of railway developments in Great Britain.

New Freight Service Equipment on Southern of Great Britain

The Southern of Great Britain has recently acquired three flat cars designed to transport by rail highway trailers carrying milk tanks of 2,000 gallon capacity. The trailers, according to a description in a recent issue of the Railway Gazette (London) are hauled onto the flat cars by motor tractors, wire-rope pulleys being provided at each end of the cars to facilitate the loading and unloading operation.

This railroad has also recently developed a new steel container for the transportation of bricks. Each of these brick containers is designed to carry a maximum load of 4 tons; their overall dimensions are 7 ft. 4¾ in., by 6 ft. 7¼ in., by 4 ft. 6¾ in.

Arranging International Expresses

The annual meeting of the European Time-table and Through Carriage Conference was held in London from October 12 to 17, and was attended by some 250 delegates, representing 30 countries and no less than 100 government departments and railway and shipping administrations. The conference, which took place in the Great Central Hotel at Marylebone Station, is held at a selected European city each October so that necessary steps may be taken to institute new services (or alterations in existing services) for the following summer and winter.

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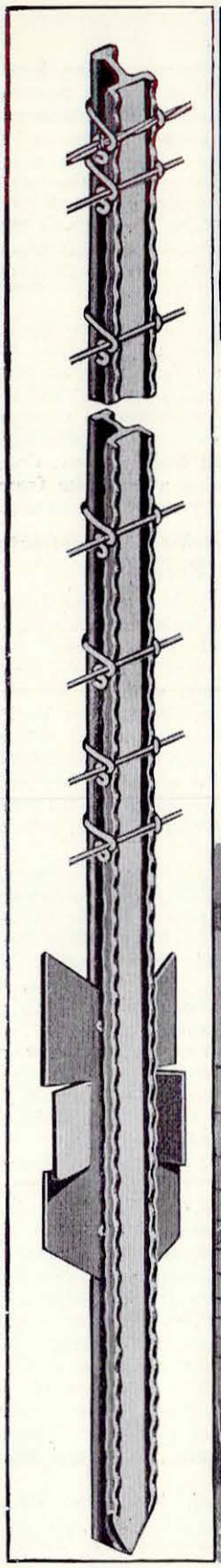
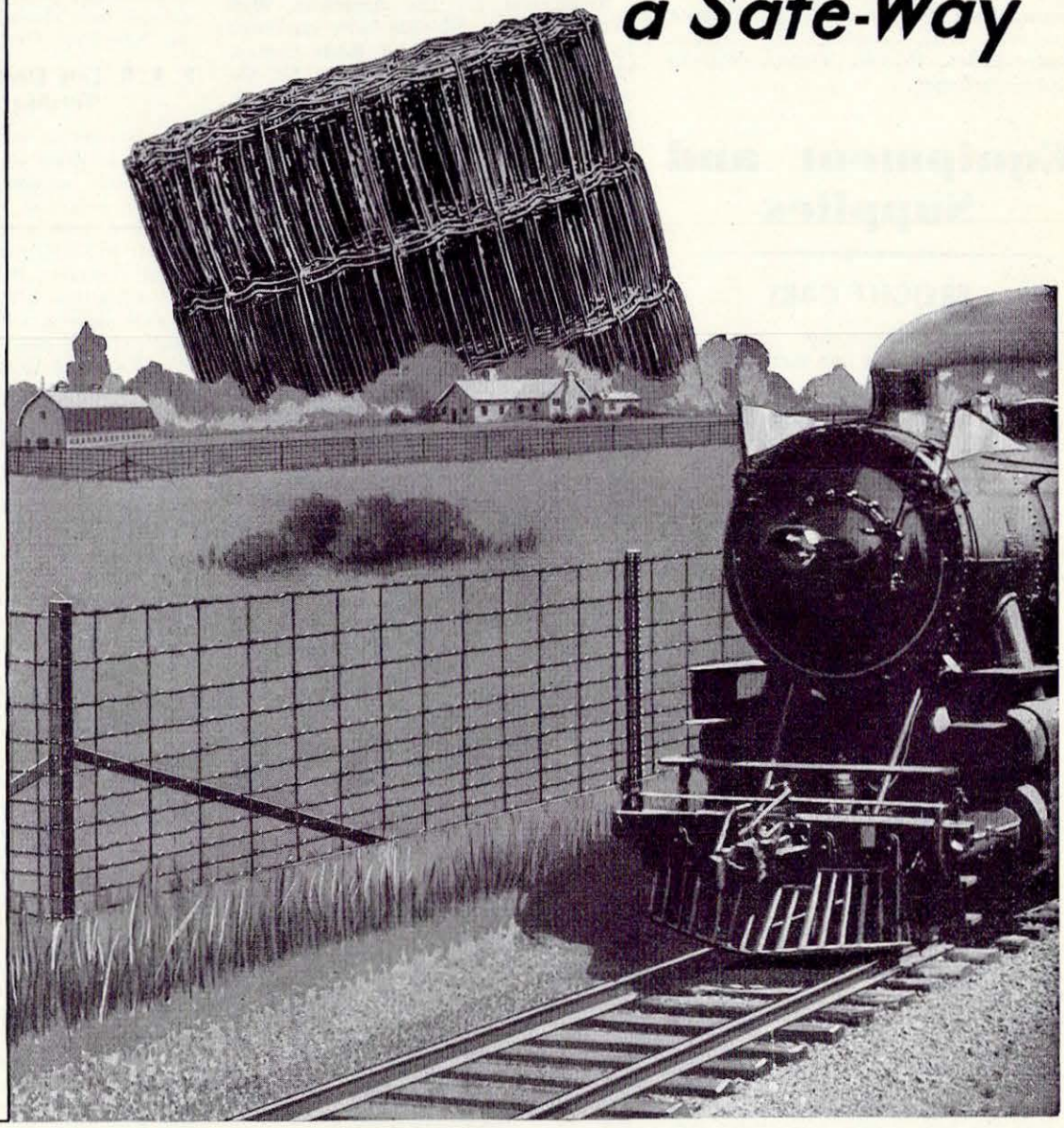


AMERICAN Fence and BANNER STEEL POSTS

IT is cheaper to put up a good fence than to pay stock claims. Likewise it is economy to buy adequate protection—proved protection—such as that offered by American Railroad Fence and Banner Steel Line Posts—the post of railroad rail construction. These products including National Expanding Anchor End and Corner Posts meet every specification recommended by the American Railway Engineering Association.

Make Your Right-of-Way- - a Safe-Way



1831 COMMEMORATING 100 YEARS of PROGRESS IN WIRE MAKING 1931

AMERICAN STEEL & WIRE COMPANY

208 South La Salle Street, Chicago SUBSIDIARY OF UNITED STATES STEEL CORPORATION And All Principal Cities

Pacific Coast Distributors: Columbia Steel Company, Russ Building, San Francisco *Export Distributors:* United States Steel Products Company, New York

This annual conference facilitates considerably the arrangement of international express trains and through cars which run between all large European cities. It saves a great deal of correspondence and many separate meetings between different railways, as all the European railways are brought together and can discuss any question regarding connecting services. This will be more appreciated when it is realized that to make an alteration in one express sometimes involves nearly a dozen different administrations, *e.g.*, if an alteration is suggested in the Simplon-Orient Express, 10 railways will perhaps have to alter their time-tables; a change in the running of the Ostend-Vienna-Orient Express might upset the train times of 11 other administrations, and so on.

The conference was last held in London in 1907, the meetings since the War having been held successively at Berne, Lucerne, Nice, Naples, The Hague, Baden-Baden, Prague, Vienna, Warsaw and Copenhagen.

Equipment and Supplies

FREIGHT CARS

THE LEHIGH NAVIGATION COAL COMPANY is inquiring for one spreader car.

THE NORTHERN PACIFIC is inquiring for 150 all-steel hopper cars of 50 tons' capacity.

IRON & STEEL

THE PENNSYLVANIA has ordered through the Ingalls Iron Works 250 tons of steel for bridges in the vicinity of Camden, N. J.

THE BOSTON & ALBANY has ordered 300 tons of structural steel from the New England Structural Steel Company, for bridge work at Springfield, Mass.

THE LONG ISLAND has ordered through the contractors, Senior & Palmer, Inc., 835 tons of steel for bridge work at Linden boulevard, East New York, from the McClintic-Marshall Corporation.

SIGNALING

THE NEW YORK CENTRAL has ordered from the General Railway Signal Company a mechanical interlocking, 56 levers for Porter, Ind., to replace a machine of similar size.

THE PENNSYLVANIA has ordered from the Union Switch & Signal Company material for electro-pneumatic interlocking at the new station now under construction at West Philadelphia, the machine to be the largest of its type yet built. Its capacity will be 303 levers, and the interlocking station will be known as "Penn" interlocking. The plant will have 105 single switches, 26 double slips, 190 light signals (high and dwarf) and 27 levers to be used for traffic and check-lock purposes.

Supply Trade

The Wright Manufacturing Company, Bridgeport, Conn., has moved its general sales office from that city to York, Pa.

The Trundle Engineering Company, Cleveland, Ohio, has opened an office at 205 West Wacker drive, Chicago. **Roy Jarrett,** representative at Chicago, has been placed in charge.

The Mattson Wire & Manufacturing Co., Inc., Joliet, Ill., has appointed the **Central Steel & Supply Co.,** Chicago, its railroad sales division for the sale of snow-guard fence to the railroads.

A receiver for the **American Well Works,** Aurora, Ill., has been appointed by the Circuit Court of Kane county, Ill., following action brought by the the Northern Trust Company, Chicago, as trustee for the bond holders. **Paul A. Florian,** advertising counselor of the company, is receiver and **H. G. Chapman,** president, is co-receiver. The receivership is of a friendly nature and it is expected that it will be of short duration.

Construction

CHICAGO, ROCK ISLAND & PACIFIC.—This road contemplates the relocation or construction of about 10 miles of line in the vicinity of Ft. Worth, Tex., to avoid the flood basin of a proposed dam. The total estimated cost of the project is about $500,000.

DELAWARE & HUDSON.—The Public Service Commission of New York has approved as not excessive the low bid submitted by the Booth & Flinn Company, Pittsburgh, Pa., for the elimination of grade crossings of this company's tracks in the city of Albany, N. Y. The crossings designated for elimination under this project are located at Broadway, Madison avenue, and South Ferry, Arch, Rensselaer, Mulberry, Schuyler and Church streets.

DELAWARE, LACKAWANNA & WESTERN-ERIE.—The New York Public Service Commission has directed the elimination of several grade crossings and ordered increased protection at other crossings of these two railroads in the towns of Bath and Campbell, N. Y. The Bordens, Mills and Wolf Run crossings of the Erie and the Mills and Wolf Run crossings of the Lackawanna will be closed and traffic diverted from them to a new marginal highway 4½ miles long, while approaches will be improved and modern flashing light signals installed at the Talbert crossing of the Erie and the Shavers crossing of the Lackawanna.

NEW YORK CENTRAL.—The Transit Road crossing of this company's line, just west of Bowmansville station, in the towns of Checktowaga and Lancaster, N. Y., has been designated for elimination, by carrying the highway over the railroad, by the Public Service Commission of New York.

PUBLIC SERVICE COMMISSION OF NEW YORK.—The New York Public Service Commission on November 24, announced its list of highway grade crossings to be considered for elimination in the year 1932. It includes 170 projects, the total estimated cost of which is $72,839,000. The list includes 48 new projects and 122 carried over from this year. Final hearings are yet to be held concerning all these crossings.

WESTERN PACIFIC.—The Supreme Court of the United States on November 23 rendered a decision holding that this company was a "party in interest" and so entitled to seek an injunction to restrain the Southern Pacific from constructing an extension in San Mateo county, Cal., without first obtaining a certificate from the Interstate Commerce Commission.

P. R. R. Lets Electrification Contracts Totaling $6,328,000

In connection with its extensive $100,000,000 program of main line electrification and terminal improvement, the Pennsylvania has recently awarded five contracts, with a total value of approximately $6,328,000, for electrification work. These contracts, the fulfillment of which will mark the completion of practically all new construction required by the company's plan of electrifying its line between New York and Washington, D. C., are, in detail, as follows:

To the Vare Construction Company, Philadelphia, Pa., $2,215,000—construction of the "Richmond" step-up station, Philadelphia; erection of a transmission line from the Richmond step-up station to Frankford Junction, Pa., and Tacony; installation of through power supply, Shellpot branch, and construction of catenary, transmission wires, substation foundations and accompanying structures and equipment between West yard, Wilmington, Del., and Perryville and Back River, Baltimore, Md.

To the Arundel Corporation, Baltimore, $1,926,000—erection of structures, catenary, transmission and substations in connection with electrification between Loudon Park, Baltimore, and Washington.

To the Vare Construction Company, $904,000—construction of foundations and guy anchors; erection of catenary and transmission structures and wires; construction of substation structures, and installation of substation equipment, all in connection with additional power supply required for the operation of through trains, between Trenton, N. J., and Wilmington.

To Gibbs & Hill, Inc., New York, $647,000—erection of structures, catenary, transmission and substations in connection with electrification, between Trenton and Millstone Junction, N. J.

To Gibbs & Hill, Inc., $636,000—erection of structures, catenary, transmission and substations in connection with electrification from Rahway to South Amboy; from Waverly to Greenville; in Waverly yard; in Greenville yard; at the Greenville substation, and on the Waverly & Passaic branch, all in the state of New Jersey.

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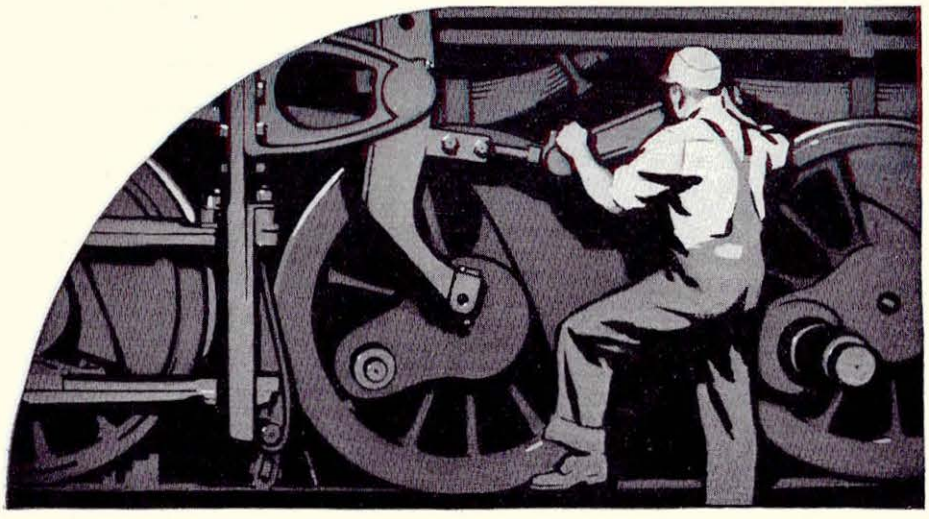

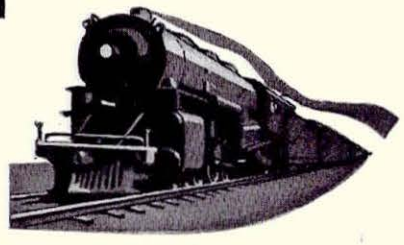

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■ By refusing to stretch after the nut has been wrenched home, Agathon Engine Bolt Steel is a big help in locomotive maintenance.

■ Agathon Engine Bolt Steel has a higher elastic limit than iron, is free from slag pockets and seams, and possesses greater resistance to fatigue.

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ACATHON STEELS
TRADE MARK

CENTRAL ALLOY DIVISION
REPUBLIC STEEL
CORPORATION
Massillon, Ohio

In addition to the five foregoing contracts, the Pennsylvania has also awarded, within the past week, two others, for miscellaneous construction work. One, amounting to $99,000 and directly connected with the general improvement program, went to the Dravo Contracting Company of Pittsburgh, Pa., and called for the removal of the center pivot pier, of fender piers, of timber fenders between fender piers and of rip-rap protection as previously constructed for the Pennsylvania & Newark Railroad bridge over the Delaware river, south of Trenton, N. J.; while the other was awarded to Eugene F. Verga, Camden, N. J., for the construction at a cost of about $64,000, of a bridge over state highway route S-41, Berlin, N. J.

Financial

ATCHISON, TOPEKA & SANTA FE.—*Lease of Pecos & Northern Texas.*—The Interstate Commerce Commission has authorized the Gulf, Colorado & Santa Fe to modify its lease of the Pecos & Northern Texas to provide for an increase in the annual rental from $245,000 to $250,271, with certain other minor changes.

ATLANTIC COAST LINE.—*Reduces Dividend.*—Directors of this company have reduced the annual dividend rate on its common stock from $7 to $4 by the declaration of a semi-annual dividend of $2 instead of the customary $3.50. Last May the company omitted its usual extra semi-annual dividend of $1.50.

BALTIMORE & OHIO.—*Control of the Buffalo, Rochester & Pittsburgh and the Buffalo & Susquehanna.*—The Interstate Commerce Commission has authorized this company to acquire control under an operating agreement of the Buffalo, Rochester & Pittsburgh and the Buffalo & Susquehanna. The original orders under which the B. & O. was permitted to acquire control of these two properties by the purchase of capital stock, under the condition that separate accounts be kept for them, are modified to eliminate the necessity for such separate accounting. Commissioner Eastman dissented.

CINCINNATI UNION TERMINAL.—*Bonds.*—This company has applied to the Inter-State Commerce Commission for authority to issue $12,000,000 of first mortgage 5 per cent bonds and to issue and renew from time to time $12,000,000 of 18-months 6 per cent notes.

ERIE.—*Operation.*—The Interstate Commerce Commission has authorized the Jefferson Railroad to acquire 1.1 miles of line, formerly a part of the Honesdale branch of the Delaware & Hudson, located in Honesdale, Pa. The Erie, lessee of the Jefferson, will operate the acquired line.

FAIRPORT, PAINESVILLE & EASTERN.—*Securities.*—The Interstate Commerce Commission has denied the application of this company for authority to issue 21,675 shares of no-par capital stock in exchange for and retirement of its present outstanding capital stock having a par value of $433,500.

LEHIGH VALLEY.—*Joint Control of Owasco River.*—The Interstate Commerce Commission has authorized this company to acquire joint control of the Owasco River Railway, a switching line in Auburn, N. Y., by purchase from the New York Central of one-half of its capital stock.

LOUISVILLE & NASHVILLE. *Reduces Dividend.*—The directors of this company have declared a semi-annual dividend of $2 on its capital stock placing the stock on a $4 annual basis, as compared with $5 established earlier in the year. Previously the stock paid $7 annually.

PENNSYLVANIA.—*Bonds.*—The Interstate Commerce Commission has authorized the Philadelphia, Baltimore & Washington to issue $944,000 of general mortgage, series D, bonds to be guaranteed by the Pennsylvania and delivered to that company at par in partial reimbursement for capital expenditures.

ST. LOUIS-SAN FRANCISCO.—*Bonds.*—This company has filed with the Interstate Commerce Commission a supplemental application for authority to issue and pledge $2,454,000 of prior lien mortgage 6 per cent bonds and $3,482,000 of consolidated mortgage 6 per cent bonds, Series B, and to issue from time to time $3,482,000 of Series C consolidated mortgage bonds in conversion of the Series B bonds.

SOUTHERN PACIFIC.—*Abandonment.*—The Interstate Commerce Commission has authorized the Galveston, Harrisburg & San Antonio and the Texas & New Orleans, lessee, to abandon a branch line extending from Van Vleck, Tex., to Hawkinsville, 17.4 miles.

TEXAS & PACIFIC.—*Bonds.*—This company has filed with the Interstate Commerce Commission a supplemental application for authority to issue and pledge $6,730,000 of general and refunding mortgage 5 per cent bonds as collateral for short term notes.

Average Prices of Stocks and of Bonds

	Nov. 24	Last week	Last year
Average price of 20 representative railway stocks..	39.00	43.42	93.48
Average price of 20 representative railway bonds..	73.23	76.85	93.08

Dividends Declared

Atlantic Coast Line.—Common, 2 per cent, payable January 11 to holders of record December 11.

Chicago & North Western.—Common and Preferred dividends omitted.

Consolidated Railroads of Cuba.—Preferred, 1½ per cent, quarterly, payable January 2 to holders of record December 10.

Cuba Railroad.—Preferred, 1½ per cent, quarterly, payable February 1 to holders of record January 15.

Illinois Central.—Leased Lines, 2 per cent, payable January 2 to holders of record December 12 to January 4.

Kansas, Oklahoma & Gulf.—Preferred A and B, 3 per cent; Preferred C, 1½ per cent, all payable December 1 to holders of record November 25.

Louisville & Nashville.—2 per cent, payable February 10 to holders of record January 15.

Southern Pacific Co.—1 per cent, quarterly, payable January 2 to holders of record November 24.

Railway Officers

EXECUTIVE

Richard Dean, senior vice-president of the Pullman Company, Chicago, and president of the Pullman Railroad, also at Chicago, has retired. **J. T. Morrison,** vice-president of the Pullman Railroad, has been elected president to succeed Mr. Dean.

OPERATING

W. H. Strachan, assistant general manager, eastern district, of the Northern Pacific, has been appointed assistant to operating vice-president, with headquarters as before at St. Paul, Minn., succeeding **B. O. Johnson,** retired because of ill health. **F. R. Bartles,** superintendent at Seattle, Wash., has been promoted to assistant general manager, eastern district, with headquarters at St. Paul, succeeding Mr. Strachan.

F. R. Mullen, superintendent of the Lincoln division of the Chicago, Burlington & Quincy, with headquarters at Lincoln, Neb., has had his jurisdiction extended to include the Omaha division. **C. J. Connett,** superintendent of the Ottumwa division, has had his jurisdiction extended to include the Creston division, with headquarters as before at Ottumwa, Iowa. **H. C. Murphy,** superintendent at Alliance, Neb., with jurisdiction over the Alliance and Sheridan divisions, now has jurisdiction over the Alliance and Sterling divisions, the Sheridan division having been placed under the jurisdiction of **F. Cone,** superintendent of the Casper division, with headquarters at Casper, Wyo. **L. E. Caldwell,** superintendent of the Omaha division, with headquarters at Omaha, Neb., has been transferred to the McCook division, with headquarters at McCook, Neb., to succeed **F. E. Haines,** who has been appointed assistant superintendent of the Creston division, with headquarters at Creston, Iowa, succeeding **K. W. Fischer,** superintendent of the Creston division, who has been appointed assistant superintendent at Omaha, Neb., with jurisdiction over the Lincoln and Omaha divisions, a newly-created position. **C. C. Holtorf,** superintendent of the Sterling division, has been appointed assistant superintendent with jurisdiction over the Alliance and Sterling divisions, with headquarters as before at Sterling, Colo. This is also a newly-created position. **W. P. Wilson,** assistant superintendent at Sheridan, Wyo., with jurisdiction over the Alliance and Sheridan divisions, now has jurisdiction over the Casper and Sheridan divisions, with headquarters at the same point.

MECHANICAL

C. R. Davenport, master mechanic of the Sterling division of the Chicago,

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BETTER FIRES

FIREBAR CORPORATION
CLEVELAND OHIO.

Burlington & Quincy, with headquarters at Sterling, Colo., has been transferred to Casper, Wyo., with jurisdiction over the Casper and Sheridan divisions. **T. E. Paradise,** master mechanic of the Alliance division, with headquarters at Alliance, Neb., has had his jurisdiction extended to include the Sterling division. **G. B. Pauley,** master mechanic of the Casper division, with headquarters at Casper, Wyo., has been appointed assistant master mechanic of the Sterling division, with headquarters at Sterling, Colo.

SPECIAL

D. G. Phillips, who relinquished the position of superintendent of safety of the Wabash some time ago, has been re-appointed to this position, effective November 16, with headquarters at St. Louis, Mo.

OBITUARY

Thomas P. Moran, superintendent of the Illinois Northern, with headquarters at Chicago, died on November 10, at his home in that city.

F. H. Hamilton, vice-president, secretary and treasurer of the St. Louis-San Francisco, with headquarters at St. Louis, Mo., died on November 23 at that point, following an operation.

E. F. Hasbrook, purchasing agent of the Chicago, Burlington & Quincy, with headquarters at Chicago, died on November 22, in the Presbyterian hospital at that point, of pneumonia. A sketch and photograph of Mr. Hasbrook were presented in the *Railway Age* for March 7, 1931, page 527, following his promotion from assistant purchasing agent to purchasing agent.

E. F. Rummel, assistant general manager of the Chicago, Milwaukee, St. Paul & Pacific, Eastern lines, who died on November 17 at Chicago, as noted in the *Railway Age* for November 21, has been associated with the operating department of the Milwaukee for more than 40 years. Mr. Rummel was born on December 1, 1876, at Milwaukee, Wis., and entered the service of the Milwaukee road in February, 1891, as an operator at Eagle, Wis. Until October, 1898, he served successively as an operator at various stations on the Northern division, as operator and yard clerk at the Gibson (Wis.) yard, and as operator and relief agent on the Northern division. He was then appointed dispatcher and side wire operator on the same division, being promoted to dispatcher on the Wisconsin Valley division about a year later. In August, 1899, Mr. Rummel was appointed extra dispatcher and operator in the telegraph office of the Northern division. In June, 1900, he was appointed agent at the North Avenue station in Milwaukee, Wis., being transferred to the Chestnut Street Station at that point about seven years later. He was promoted to chief clerk to the general superintendent of the Middle district, with headquarters at Milwaukee, in December, 1917, which position he held until November 10, 1918, when he was appointed trainmaster of

E. F. Rummel

the River division. On July 1, 1920, Mr. Rummel was sent to Chicago as assistant superintendent of the terminals at that point, being promoted to superintendent of the Sioux City and Dakota division, with headquarters at Sioux City, Iowa, on November 15, 1921. On February 1, 1925, Mr. Rummel was sent to Seattle, Wash., as general superintendent of the Lines West, where he remained until October 1, 1927, when he returned to Chicago as assistant general manager of the Lines East. He held this position continuously until the time of his death.

Sydney B. Wight, special representative of the president of the New York Central Lines, died at the New York Hospital, New York, on November 20. Born in Detroit, Mich., on February 10, 1856, he was educated as a boy in France and Germany, and subsequently graduated as a mining engineer from the University of Michigan. Mr. Wight entered railroad service as secretary to the president of the Michigan Central in 1891. He was subsequently purchasing agent of that road and later general purchasing agent of the New York Central Lines. During the United States Railroad Administration, Mr. Wight was chairman of the regional purchasing committee for all of the railroads in the Eastern district. At the end of Federal control, he was appointed manager, purchases and stores, of the New York Central Lines, which position he held until his appointment on March 1, 1926, as special representative of the president.

S. B. Wight

A. H. Harris, Vice-President, New York Central Lines, Dies

Albert Hall Harris, vice-president, finance and corporate relations, and chairman of the executive and finance committee's of the New York Central Lines, died suddenly at his home in New York on November 21.

Mr. Harris was born at Rochester,

Albert Hall Harris

N. Y., on July 4, 1861, and was educated at the University of Rochester, graduating in 1881 with the degree of A.B. Later he studied at the Columbia Law School in New York. Upon being admitted to the bar he practiced law as his father's partner in the firm of Harris & Harris at Rochester, which was local counsel for the New York Central at that point. He entered the service of the New York Central & Hudson River (now the New York Central), in 1905, as general attorney, with headquarters at New York. In 1906, he was promoted to general counsel for the New York Central, which position he held until 1920. In 1906, he was also appointed vice-president of the Michigan Central; Cleveland, Cincinnati, Chicago & St. Louis; Pittsburgh & Lake Erie, and Lake Shore & Michigan Southern. He relinquished the vice-presidency of the latter road in 1914, when it was absorbed by the N. Y. C., to become vice-president of the New York Central, continuing also as general counsel. In February, 1920, he was elected vice-president, finance and corporate relations, and on April 9, 1924, he became chairman of the finance committee. On May 9, 1928, he was also elected chairman of the executive committee, holding these three positions with the New York Central and with all other companies included in the N. Y. C. system, until the time of his death.

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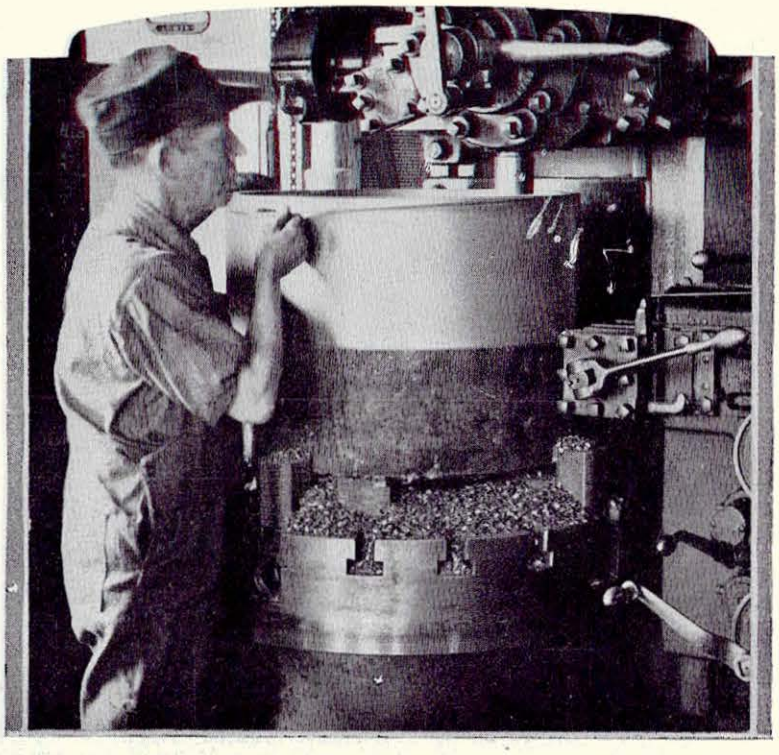

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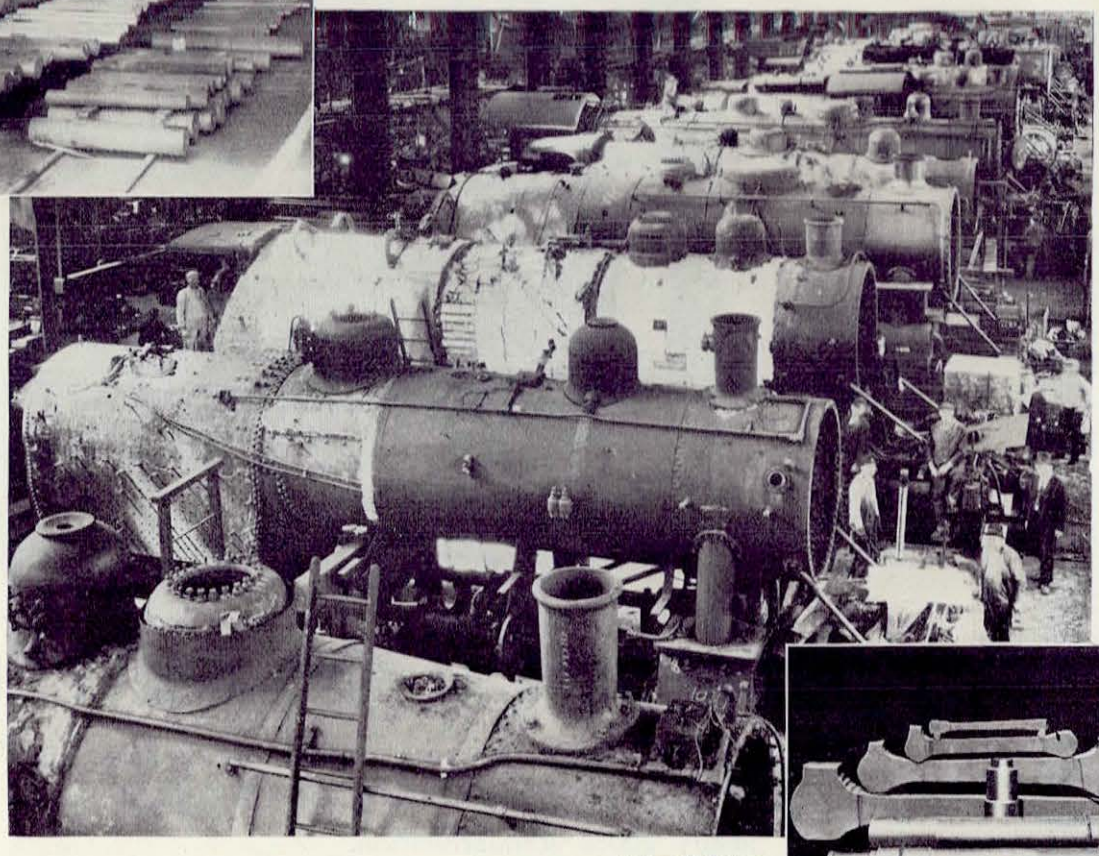
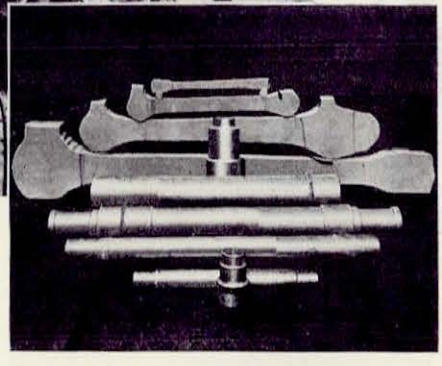


Ewing Galloway



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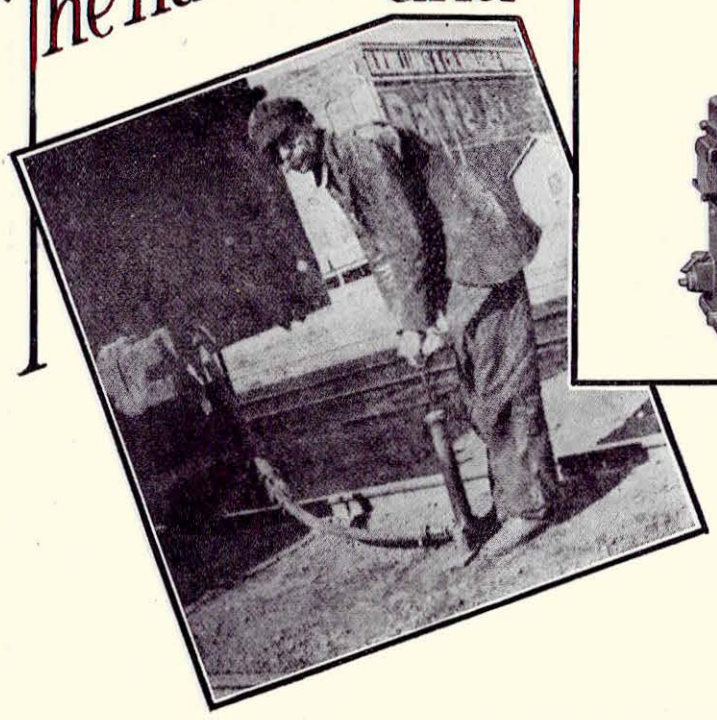

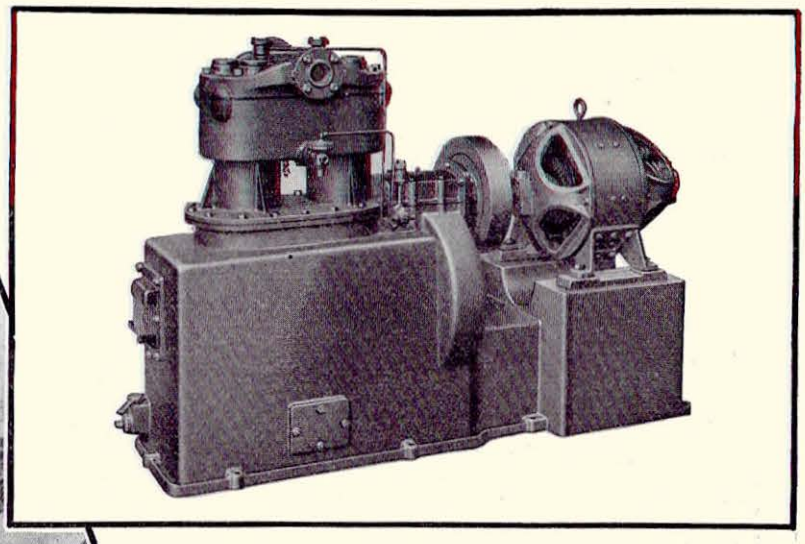

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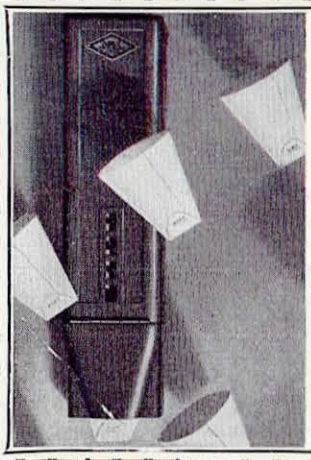

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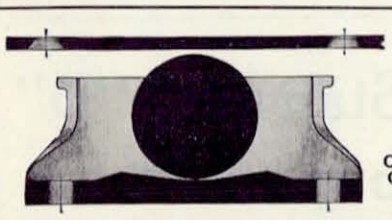
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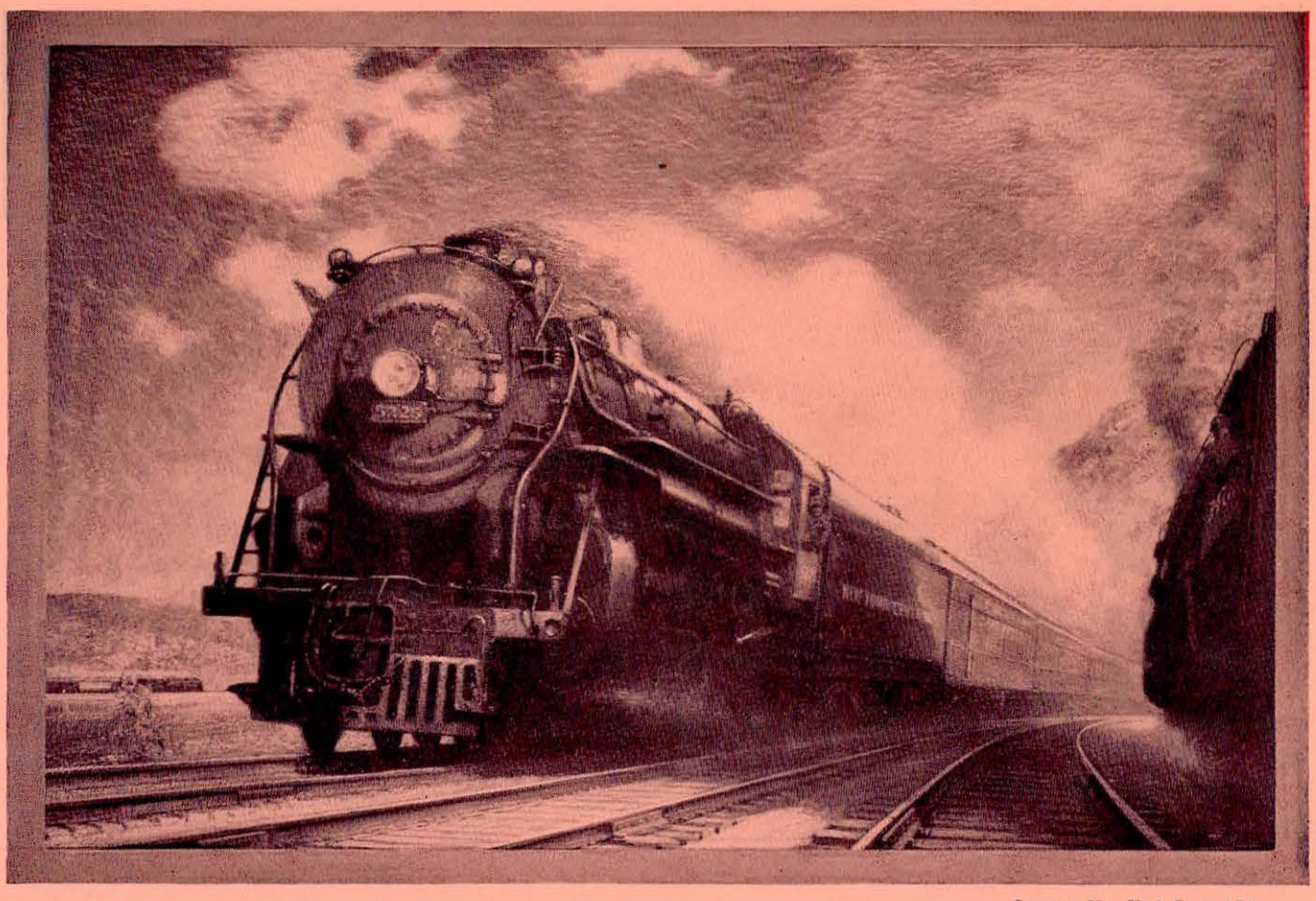

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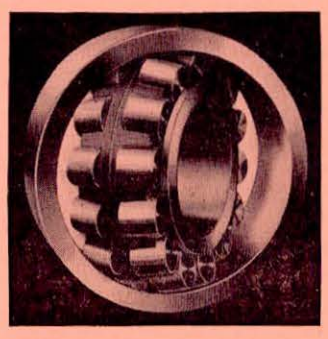

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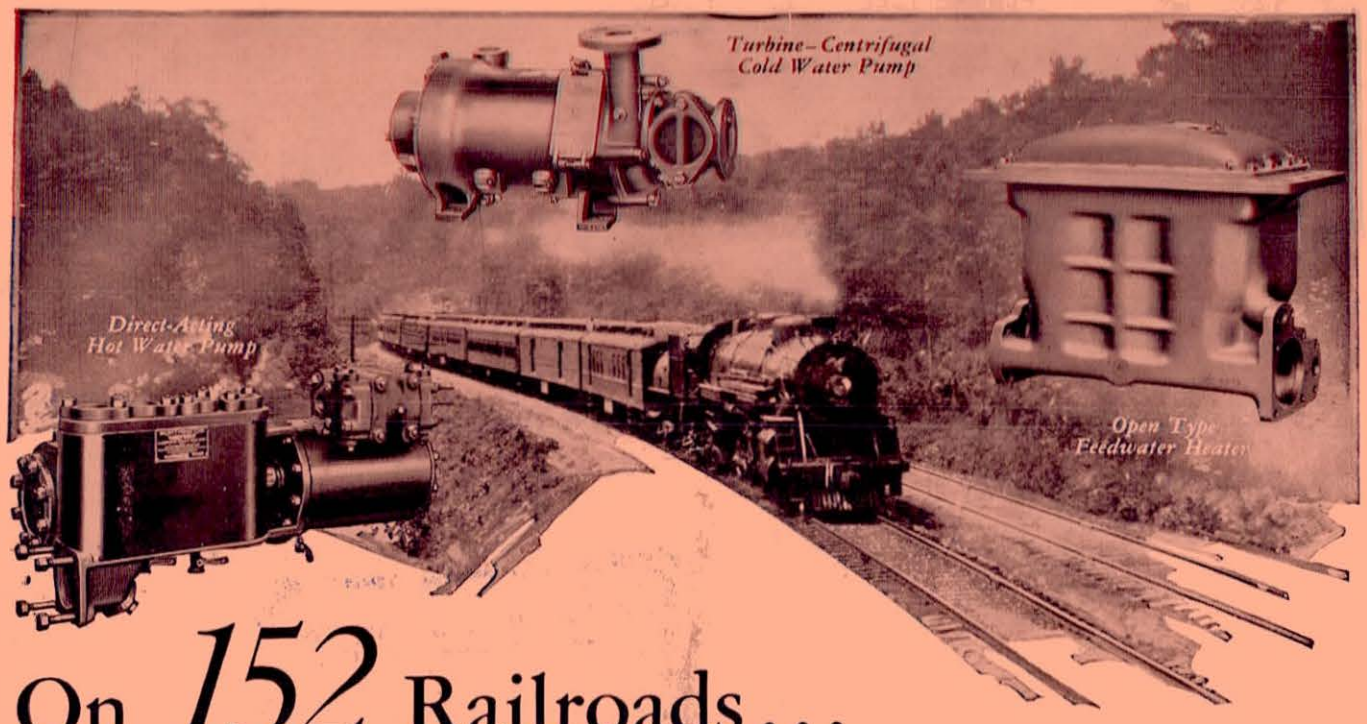

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